NOTE

This Microfiche meets the quality requirements of the American National Standard for Microfiche of Documents (ANSI PH5.9-1975). However, because of imperfections in the document from which it was made, it contains images that are illegible or difficult to read. The source document for this microfiche is the best copy that could be obtained prior to filming.

CIS Congressional Information Service, Inc
Washington, D.C.

S. Hrg. 100-445, Pt. 29

EMPLOYMENT-UNEMPLOYMENT

HEARINGS

BEFORE THE

JOINT ECONOMIC COMMITTEE
CONGRESS OF THE UNITED STATES

ONE HUNDREDTH CONGRESS

FIRST SESSION

PART 29

JULY 2, AUGUST 7, SEPTEMBER 4,
AND OCTOBER 2, 1987

Printed for the use of the Joint Economic Committee

U.S. GOVERNMENT PRINTING OFFICE
83-467 WASHINGTON : 1988

For sale by the Superintendent of Documents, Congressional Sales Office
U.S. Government Printing Office, Washington, DC 20402

J841-8

JOINT ECONOMIC COMMITTEE

[Created pursuant to sec. 5(a) of Public Law 304, 79th Congress]

SENATE

PAUL S. SARBANES, Maryland, *Chairman*
WILLIAM PROXMIRE, Wisconsin
LLOYD BENTSEN, Texas
EDWARD M. KENNEDY, Massachusetts
JOHN MELCHER, Montana
JEFF BINGAMAN, New Mexico
WILLIAM V. ROTH, Jr., Delaware
STEVE SYMMS, Idaho
ALFONSE M. D'AMATO, New York
PETE WILSON, California

HOUSE OF REPRESENTATIVES

LEE H. HAMILTON, Indiana, *Vice Chairman*
AUGUSTUS F. HAWKINS, California
DAVID R. OBEY, Wisconsin
JAMES H. SCHEUER, New York
FORTNEY H. (PETE) STARK, California
STEPHEN J. SOLARZ, New York
CHALMERS P. WYLIE, Ohio
OLYMPIA J. SNOWE, Maine
HAMILTON FISH, Jr., New York
J. ALEX McMILLAN, North Carolina

JUDITH DAVISON, *Executive Director*
RICHARD F KAUFMAN, *General Counsel*
STEPHEN QUICK, *Chief Economist*
ROBERT J. TOSTERUD, *Minority Assistant Director*

CONTENTS

WITNESSES AND STATEMENTS

THURSDAY, JULY 2, 1987

Page

Sarbanes, Hon. Paul S., chairman of the Joint Economic Committee: Opening statement 1

Norwood, Hon. Janet L., Commissioner, Bureau of Labor Statistics, Department of Labor, accompanied by Thomas J. Plewes, Associate Commissioner, Office of Employment and Unemployment Statistics; and John F. Early, Assistant Commissioner, Division of Consumer Prices and Price Indexes 2

FRIDAY, AUGUST 7, 1987

Sarbanes, Hon. Paul S., chairman of the Joint Economic Committee: Opening statement 43

Norwood, Hon. Janet L., Commissioner, Bureau of Labor Statistics, Department of Labor, accompanied by Thomas J. Plewes, Associate Commissioner, Office of Employment and Unemployment Statistics; and Kenneth V. Dalton, Associate Commissioner, Office of Prices and Living Conditions 43

FRIDAY, SEPTEMBER 4, 1987

Proxmire, Hon. William, member of the Joint Economic Committee, presiding: Opening statement 75

Norwood, Hon. Janet L., Commissioner, Bureau of Labor Statistics, Department of Labor, accompanied by Thomas J. Plewes, Associate Commissioner, Office of Employment and Unemployment Statistics; and Kenneth V. Dalton, Associate Commissioner, Office of Prices and Living Conditions 78

FRIDAY, OCTOBER 2, 1987

Sarbanes, Hon. Paul S., chairman of the Joint Economic Committee: Opening statement 125

Norwood, Hon. Janet L., Commissioner, Bureau of Labor Statistics, Department of Labor, accompanied by Kenneth V. Dalton, Associate Commissioner, Office of Prices and Living Conditions; and John E. Bregger, Assistant Commissioner, Office of Current Employment Analysis 128

SUBMISSIONS FOR THE RECORD

THURSDAY, JULY 2, 1987

McMillan, Hon. J. Alex, member of the Joint Economic Committee: Written opening statement 29

Norwood, Hon. Janet L., et al.:

- Table reflecting unemployment rates of all civilian workers by alternative seasonal adjustment methods 4
- Press release No. 87-271 entitled "The Employment Situation: June 1987," Bureau of Labor Statistics, Department of Labor, July 2, 1987 6
- Response to Congressman McMillan's questions regarding the educational attainment of women in the labor force and the youth share of discouraged workers 32

FRIDAY, AUGUST 7, 1987

Norwood, Hon. Janet L., et al.:

Page

- Table reflecting unemployment rates of all civilian workers by alternative seasonal adjustment methods 47
- Press release No. 87-344 entitled "The Employment Situation: July 1987," Bureau of Labor Statistics, Department of Labor, August 7, 1987. 49

FRIDAY, SEPTEMBER 4, 1987

D'Amato, Hon. Alfonse M., member of the Joint Economic Committee: Written opening statement..... 76

Norwood, Hon. Janet L., et al.:

- Table reflecting unemployment rates of all civilian workers by alternative seasonal adjustment methods 81
- Charts reflecting unemployment rate of all civilian workers; civilian employment-population ratio; unemployment rates for major age-sex groups; civilian employment-population ratio for major age-sex groups; unemployment rates for whites, blacks, and Hispanics; civilian employment-population ratio for whites, blacks, and Hispanics; long-term unemployment; and labor force participation rates for adult men and women..... 83
- Press release No. 87-382 entitled "The Employment Situation: August 1987," Bureau of Labor Statistics, Department of Labor, September 4, 1987 91
- Response to Senator Proxmire's request regarding research on the economic effects of minimum wage laws..... 121

FRIDAY, OCTOBER 2, 1987

D'Amato, Hon. Alfonse M., member of the Joint Economic Committee: Written opening statement..... 126

Norwood, Hon. Janet L., et al.:

- Table reflecting unemployment rates of all civilian workers by alternative seasonal adjustment methods 130
- Press release No. 87-423 entitled "The Employment Situation: September 1987," Bureau of Labor Statistics, Department of Labor, October 2, 1987 132

EMPLOYMENT-UNEMPLOYMENT

THURSDAY, JULY 2, 1987

CONGRESS OF THE UNITED STATES,
JOINT ECONOMIC COMMITTEE,
Washington, DC.

The committee met, pursuant to notice, at 9:30 a.m., in room SD-628, Dirksen Senate Office Building, Hon. Paul S. Sarbanes (chairman of the committee) presiding.

Present: Senators Sarbanes and Melcher and Representative McMillan.

Also present: Richard F Kaufman, general counsel; and William Buechner, Dan Bond, Jim Klumpner, Paul Manchester, Dale Jahr, and Chris Frenze, professional staff members.

OPENING STATEMENT OF SENATOR SARBANES, CHAIRMAN

Senator SARBANES. The committee will come to order.

This morning the Joint Economic Committee will be conducting two hearings. The first will be the committee's regularly scheduled hearing on the employment and unemployment situation for June and we will hear from the Commissioner of Labor Statistics, Janet Norwood.

Following the conclusion of the hearing on the unemployment figures, the committee will resume its midyear review of the economy with a panel of two distinguished economists, Lawrence Chimerine, chief economist at Wharton Econometrics; and Alan Blinder, professor of economics at Princeton, who will focus on the economic outlook and the challenges facing economic policy.

I am pleased to welcome Commissioner Norwood this morning. On Monday, Commissioner Norwood was sworn in for her third term as head of the Bureau of Labor Statistics. It was a special occasion and I was pleased to be there.

Commissioner Norwood has had a long and distinguished career as a public servant and has brought superior leadership to the Bureau of Labor Statistics. As Commissioner of Labor Statistics for the last 8 years—and now we can look forward to an additional 4 years—and as Acting Commissioner for a year before she officially became Commissioner of Labor Statistics, Janet Norwood has unfailingly adhered to the highest standards of professional integrity. So, Commissioner, my congratulations and best wishes go to you as you begin your third term. We are pleased to have you again before the committee. We look forward to hearing from you and your associates this morning.

STATEMENT OF HON. JANET L. NORWOOD, COMMISSIONER, BUREAU OF LABOR STATISTICS, DEPARTMENT OF LABOR, ACCOMPANIED BY THOMAS J. PLEWES, ASSOCIATE COMMISSIONER, OFFICE OF EMPLOYMENT AND UNEMPLOYMENT STATISTICS; AND JOHN F. EARLY, ASSISTANT COMMISSIONER, DIVISION OF CONSUMER PRICES AND PRICE INDEXES

Mrs. NORWOOD. Thank you very much, Mr. Chairman. I appreciate those kind words.

I have with me this morning on my right, John Early, who is our Assistant Commissioner for Consumer Prices; and on my left, Tom Plewes, who is in charge of our employment and unemployment programs.

It's always a pleasure to be here.

Unemployment declined in June, and employment showed little change. Following a very large increase from April to May, the labor force dropped in June. The overall unemployment rate, at 6 percent, and the civilian rate, at 6.1 percent, were each down 0.2 percentage point from May. Both rates have declined considerably over the past year.

Changes in the labor force of young adults—those 16 to 24 years of age—can be quite volatile during the summer months. So far this year, from April to June, the labor force for this group has risen by about 2.6 million before seasonal adjustment—considerably less than last year. Partly as a result of this development, after seasonal adjustment, joblessness among teenagers dropped from 17.7 to 15.9 percent in June.

The labor market experience of adult men during the summer months is far less volatile than for youngsters, and their unemployment rate was unchanged from May to June. However, at 5.5. percent, the June rate for adult men was well below the 6 percent which prevailed at the end of last year. The jobless rate for adult women declined from 5.4 percent in May to 6.2 percent in June. Employment for this group has advanced strongly in 1987. Their employment-population ratio held at a record high of 53.2 percent in June, and the jobless rate for adult women declined in June to the lowest level in 13 years.

Nonfarm payroll employment, as measured by our business survey, changed very little in May and in June, after increasing an average of 250,000 per month from January to April. Employment in the service-producing sector, growing by only 100,000 from May to June, has slowed from the pace of previous months. In fact, in the last 2 months, employment in this sector has grown at only half the rate registered in the year.

Employment in the goods-producing industries held steady in June, as the number of jobs in mining, construction, and manufacturing hardly changed at all. The factor workweek remained at a very high level, however—41 hours. Factory overtime, at 3.7 hours in June, was still quite high by historical standards.

Each quarter, Mr. Chairman, we present data on discouraged workers—those who report that they would like to work but have not searched for work because they believe that no jobs are available. At 1 million in the second quarter of 1987, the number of discouraged workers declined by about 130,000 from the first quarter.

This was the lowest level since the onset of the 1981–82 recession. Discouragement had reached a high of 1.8 million workers at the end of 1982.

The combined effect of discouragement together with unemployment and involuntary part-time work can be seen in the quarterly BLS U–7 series that appears in table A–5 in our news release. All three measures dropped in the second quarter, and U–7 declined from 10 percent in the January to March period to 9.3 percent in the April to June period. Over the same time, the civilian jobless rate fell from 6.7 to 6.2 percent.

In summary, the data released this morning show a drop in joblessness in June but very little change in employment. Factory employment stayed at the May level, and the pace of job growth in services slowed.

I'd like very briefly to comment on our annual news release on international comparisons of manufacturing productivity and labor cost trends, which was issued since I last appeared here. The figures indicate that the competitive situation for U.S. manufacturers—vis-a-vis Japan and industrial Europe—improved greatly in 1986.

U.S. manufacturing labor productivity, real output per hour, rose 3.5 percent from 1985 to 1986. While the increase was less than in 1985, it was well above the average of the last 13 years. It also exceeded the gains recorded by Canada, Japan, and the seven European countries for which we have comparative 1986 measures. Factory productivity rose about 3 percent in Japan and the United Kingdom, about 1 to 2 percent in France, Germany, Italy, and Sweden, and fell in Canada, Denmark, and Norway.

In addition, manufacturing unit labor costs, which reflect changes in both labor productivity and hourly compensation costs, fell about one-half of 1 percent in the United States, while rising about 1 percent in Japan and by 2.5 to 10 percent in the other countries. Measured on a U.S. dollar basis, to take account of the strong appreciations, of the yen and European currencies, unit labor costs rose over 40 percent in Japan and by about 20 to 40 percent in the European countries.

The Japanese and European currencies continued to appreciate against the U.S. dollar in the first half of this year and U.S. manufacturing unit labor costs fell at an annual rate of about 3 percent in the first quarter. This should help to improve our competitive situation still further.

Mr. Chairman, we will be very happy to try to answer any questions.

Senator **Sarbanes**. Thank you very much, Commissioner.

[The table attached to Mrs. Norwood's statement, together with the Employment Situation press release, follows:]

Unemployment rates of all civilian workers by alternative seasonal adjustment methods

Month and year	Unadjusted rate	X-11 ARIMA method						X-11 method (official method before 1980)	Range (cols. 2-8)
		Official procedure	Concurrent (as first computed)	Concurrent (revised)	Stable	Total	Residual		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1986									
June........	7.3	7.1	7.1	7.2	7.1	7.1	7.1	7.1	.1
July........	7.0	7.0	7.0	7.0	7.0	6.9	7.0	7.0	.1
August......	6.7	6.8	6.8	6.8	6.8	6.9	7.0	6.8	.2
September...	6.8	7.0	7.0	7.0	7.0	7.0	7.0	7.0	–
October.....	6.6	6.9	6.9	6.9	7.0	6.9	6.9	7.0	.1
November....	6.6	6.9	6.9	6.9	6.9	6.9	7.0	7.0	.1
December....	6.3	6.7	6.7	6.7	6.6	6.7	6.7	6.7	.1
1987									
January.....	7.3	6.7	6.7	6.7	6.7	6.8	6.6	6.7	.2
February....	7.2	6.7	6.7	6.6	6.6	6.7	6.5	6.7	.2
March.......	6.9	6.6	6.6	6.5	6.6	6.6	6.5	6.6	.1
April.......	6.2	6.3	6.3	6.3	6.4	6.3	6.3	6.3	.1
May.........	6.1	6.3	6.3	6.3	6.4	6.3	6.4	6.3	.1
June........	6.3	6.1	6.1	6.1	6.1	6.1	6.1	6.1	–

SOURCE: U.S. DEPARTMENT OF LABOR
Bureau of Labor Statistics
July 1987

(1) Unadjusted rate. Unemployment rate for all civilian workers, not seasonally adjusted.

(2) Official procedure (X-11 ARIMA method). The published seasonally adjusted rate for all civilian workers. Each of the 3 major civilian labor force components--agricultural employment, nonagricultural employment and unemployment--for 4 age-sex groups--males and females, ages 16-19 and 20 years and over--are seasonally adjusted independently using data from January 1975 forward. The data series for each of these 12 components are extended by a year at each end of the original series using ARIMA (Auto-Regressive, Integrated, Moving Average) models chosen specifically for each series. Each extended series is then seasonally adjusted with the X-11 portion of the X-11 ARIMA program. The 4 teenage unemployment and nonagricultural employment components are adjusted with the additive adjustment model, while the other components are adjusted with the multiplicative model. The unemployment rate is computed by summing the 4 seasonally adjusted unemployment components and calculating that total as a percent of the civilian labor force total derived by summing all 12 seasonally adjusted components. All the seasonally adjusted series are revised at the end of each year. Extrapolated factors for January-June are computed at the beginning of each year; extrapolated factors for July-December are computed in the middle of the year after the June data become available. Each set of 6-month factors are published in advance, in the January and July issues, respectively, of Employment and Earnings.

(3) Concurrent (as first computed, X-11 ARIMA method). The official procedure for computation of the rate for all civilian workers using the 12 components is followed except that extrapolated factors are not used at all. Each component is seasonally adjusted with the X-11 ARIMA program each month as the most recent data become available. Rates for each month of the current year are shown as first computed; they are revised only once each year, at the end of the year when data for the full year become available. For example, the rate for January 1985 would be based, during 1985, on the adjustment of data from the period January 1975 through January 1985.

(4) Concurrent (revised, X-11 ARIMA method). The procedure used is identical to (3) above, and the rate for the current month (the last month displayed) will always be the same in the two columns. However, all previous months are subject to revision each month based on the seasonal adjustment of all the components with data through the current month.

(5) Stable (X-11 ARIMA method). Each of the 12 civilian labor force components is extended using ARIMA models as in the official procedure and then run through the X-11 part of the program using the stable option. This option assumes that seasonal patterns are basically constant from year-to-year and computes final seasonal factors as unweighted averages of all the seasonal-irregular components for each month across the entire span of the period adjusted. As in the official procedure, factors are extrapolated in 6-month intervals and the series are revised at the end of each year. The procedure for computation of the rate from the seasonally adjusted components is also identical to the official procedure.

(6) Total (X-11 ARIMA method). This is one alternative aggregation procedure, in which total unemployment and civilian labor force levels are extended with ARIMA models and directly adjusted with multiplicative adjustment models in the X-11 part of the program. The rate is computed by taking seasonally adjusted total unemployment as a percent of seasonally adjusted total civilian labor force. Factors are extrapolated in 6-month intervals and the series revised at the end of each year.

(7) Residual (X-11 ARIMA method). This is another alternative aggregation method, in which total civilian employment and civilian labor force levels are extended using ARIMA models and then directly adjusted with multiplicative adjustment models. The seasonally adjusted unemployment level is derived by subtracting seasonally adjusted employment from seasonally adjusted labor force. The rate is then computed by taking the derived unemployment level as a percent of the labor force level. Factors are extrapolated in 6-month intervals and the series revised at the end of each year.

(8) X-11 method (official method before 1980). The method for computation of the official procedure is used except that the series are not extended with ARIMA models and the factors are projected in 12-month intervals. The standard X-11 program is used to perform the seasonal adjustment.

Methods of Adjustment. The X-11 ARIMA method was developed at Statistics Canada by the Seasonal Adjustment and Times Series Staff under the direction of Estela Bee Dagum. The method is described in The X-11 ARIMA Seasonal Adjustment Method, by Estela Bee Dagum, Statistics Canada Catalogue No. 12-564E, February 1980.

The standard X-11 method is described in X-11 Variant of the Census Method II Seasonal Adjustment Program, by Julius Shiskin, Allan Young and John Musgrave (Technical Paper No. 15, Bureau of the Census, 1967).

News United States
Department
of Labor

Bureau of Labor Statistics Washington, D.C. 20212

Technical information: (202) 523-1371
523-1944
523-1959
Media contact: 523-1913

USDL 87-271

TRANSMISSION OF MATERIAL IN THIS
RELEASE IS EMBARGOED UNTIL
8:30 A.M. (EDT), THURSDAY,
JULY 2, 1987

THE EMPLOYMENT SITUATION: JUNE 1987

Employment was little changed in June and unemployment declined, the Bureau of Labor Statistics of the U.S. Department of Labor reported today. The overall jobless rate was 6.0 percent and the civilian rate was 6.1 percent, each two-tenths of a point below May levels.

Nonagricultural payroll employment--as measured by the survey of business establishments--and total civilian employment--as measured by the survey of households--were about unchanged in June, after seasonal adjustment. Both surveys showed increases of roughly 2-1/2 million over the past year.

Unemployment (Household Survey Data)

The number of unemployed declined by 285,000 to 7.3 million, and the civilian unemployment rate fell two-tenths of a percentage point to 6.1 percent. The June jobless rate represented an improvement of six-tenths of a point in the first half of 1987 and was at its lowest point since December 1979.

Fewer young people than normal had entered the labor force as of the June survey week, which was unusually early this year. As a consequence, after seasonal adjustment, declines occurred for both youth employment and unemployment. Teenagers accounted for more than two-thirds of the decline in the number of jobseekers. Their jobless rate fell almost 2 percentage points to 15.9 percent, and that for black teenagers was down nearly 6 percentage points to 33.3 percent. There was also a decline in unemployment among adult women, with their rate edging down two-tenths of a point to 5.2 percent. The rate for adult men was unchanged at 5.5 percent.

Unemployment rates for whites (5.2 percent) and Hispanics (8.5 percent) were little changed, but the rate for blacks (12.7 percent) was down about a percentage point. (See tables A-2 and A-3.)

Civilian Employment and the Labor Force (Household Survey Data)

Civilian employment, following an unusually large rise in the previous month, changed little in June, after seasonal adjustment. Much of the lackluster June employment performance was attributable to agriculture, which picked up fewer than half of its normal May-to-June employment rise, thus falling by 155,000 on a seasonally adjusted basis. Despite June's weakness, the employment total of 112.3 million was 2.6 million higher than a year earlier. (See table A-1.)

Table A. Major indicators of labor market activity, seasonally adjusted

Category	Quarterly averages		Monthly data			May-June change
	1987		1987			
	I	II	Apr.	May	June	
HOUSEHOLD DATA						
	Thousands of persons					
Labor force 1/.........	120,943	121,341	121,070	121,719	121,235	-484
Total employment 1/..	112,995	113,906	113,570	114,173	113,975	-198
Civilian labor force...	119,202	119,615	119,335	119,993	119,517	-476
Civilian employment..	111,254	112,180	111,835	112,447	112,257	-190
Unemployment.........	7,948	7,435	7,500	7,546	7,260	-286
Not in labor force.....	62,800	62,912	63,009	62,540	63,187	647
Discouraged workers..	1,168	1,037	N.A.	N.A.	N.A.	N.A.
	Percent of labor force					
Unemployment rates:						
All workers 1/.......	6.6	6.1	6.2	6.2	6.0	-0.2
All civilian workers.	6.7	6.2	6.3	6.3	6.1	-.2
Adult men..........	5.9	5.5	5.5	5.5	5.5	0
Adult women........	5.8	5.4	5.5	5.4	5.2	-.2
Teenagers..........	17.9	17.0	17.4	17.7	15.9	-1.8
White..............	5.7	5.3	5.4	5.3	5.2	-.1
Black..............	14.2	13.2	13.0	13.8	12.7	-1.1
Hispanic origin....	9.7	8.8	9.2	8.7	8.5	-.2
ESTABLISHMENT DATA						
	Thousands of jobs					
Nonfarm employment.....	101,133	p101,686	101,598	p101,672	p101,788	p116
Goods-producing......	24,733	p24,761	24,759	p24,755	p24,769	p14
Service-producing....	76,399	p76,925	76,839	p76,917	p77,019	p102
	Hours of work					
Average weekly hours:						
Total private........	34.8	p34.8	34.7	p34.9	p34.8	p-0.1
Manufacturing........	41.0	p40.9	40.6	p41.0	p41.0	p0
Overtime............	3.6	p3.7	3.5	p3.8	p3.7	p-.1

1/ Includes the resident Armed Forces. N.A.=not available.
p=preliminary.

After rising in May, the rate of labor force participation returned to the April level of 65.4 percent. Participation rates for adult men and women were each down two-tenths of a percentage point to 78.0 and 56.1 percent, respectively. The rate for teens fell more than 2 points to 53.0 percent. While the labor force declined in June, it has grown by 1.5 million over the past 12 months to a level of 121.2 million.

Discouraged Workers (Household Survey Data)

In the second quarter of 1987, there were about 1.0 million discouraged workers--persons who wanted to work but had not looked for jobs because they believed they could not find any. This was a slight improvement from the 1.1 million in the previous quarter. Two-thirds of these persons cited problems with the job market as their reason for not searching for work, while the rest cited personal factors (such as age or educational deficiencies). Blacks accounted for a disproportionately large share of the discouraged workers--29 percent. (See table A-14.)

Industry Payroll Employment (Establishment Survey Data)

Total nonagricultural payroll employment rose about in line with what is expected for this time of year and, after seasonal adjustment, was about unchanged at 101.8 million in June. This was the second month in a row that there was little job growth in business establishments. The job count was 2.5 million above its year-earlier level, however, with nearly all the growth in the service-producing sector. (See table B-1.)

In June, job growth slowed in the service-producing sector. A small gain occurred in the services industry, most of it in health services. In the goods-producing sector, construction employment remained near its May level after seasonal adjustment. Job gains in the industry this spring have barely kept up with seasonally-expected growth. Employment in mining and its oil and gas extraction component was unchanged from May but has shown small gains thus far in 1987, following large declines in 1986. Manufacturing employment was unchanged over the month, after also posting small gains earlier in the year.

Weekly Hours (Establishment Survey Data)

The average workweek of production or nonsupervisory workers on private nonagricultural payrolls edged down 0.1 hour to 34.8 hours, seasonally adjusted. The manufacturing workweek was unchanged at 41.0 hours, and factory overtime inched down by 0.1 hour to 3.7. Both figures have recently been very high by historical standards. (See table B-2.)

The index of aggregate weekly hours of production or nonsupervisory workers on private nonagricultural payrolls was virtually unchanged at 120.1 (1977=100) in June, seasonally adjusted. This was nearly 3 percent higher than the June 1986 index. (See table B-5.)

Hourly and Weekly Earnings (Establishment Survey Data)

On a seasonally adjusted basis, average hourly earnings and averag weekly earnings were about unchanged in June. Prior to seasona adjustment, hourly earnings remained at $8.93, while weekly earnings wer up $1.79 to $312.55. (See table B-3.)

The Hourly Earnings Index (Establishment Survey Data)

The Hourly Earnings Index (HEI) was 173.1 (1977=100) in June seasonally adjusted, an increase of 0.2 percent from May. For the 12 month ended in June, the increase was 2.3 percent. The HEI excludes the effect of two types of changes unrelated to underlying wage rat movements--fluctuations in manufacturing overtime and interindustr employment shifts. In dollars of constant purchasing power, the HE decreased 1.4 percent during the 12-month period ended in May. (See tabl B-4.)

The Employment Situation for July 1987 will be released on Friday, August 7, at 8:30 A.M. (EDT).

Explanatory Note

This news release presents statistics from two major surveys, the Current Population Survey (household survey) and the Current Employment Statistics Survey (establishment survey). The household survey provides the information on the labor force, total employment, and unemployment that appears in the A tables, marked HOUSEHOLD DATA. It is a sample survey of about 59,500 households that is conducted by the Bureau of the Census with most of the findings analyzed and published by the Bureau of Labor Statistics (BLS).

The establishment survey provides the information on the employment, hours, and earnings of workers on nonagricultural payrolls that appears in the B tables, marked ESTABLISHMENT DATA. This information is collected from payroll records by BLS in cooperation with State agencies. The sample includes over 290,000 establishments employing over 38 million people.

For both surveys, the data for a given month are actually collected for and relate to a particular week. In the household survey, unless otherwise indicated, it is the calendar week that contains the 12th day of the month, which is called the survey week. In the establishment survey, the reference week is the pay period including the 12th, which may or may not correspond directly to the calendar week.

The data in this release are affected by a number of technical factors, including definitions, survey differences, seasonal adjustments, and the inevitable variance in results between a survey of a sample and a census of the entire population. Each of these factors is explained below.

Coverage, definitions, and differences between surveys

The sample households in the household survey are selected so as to reflect the entire civilian noninstitutional population 16 years of age and older. Each person in a household is classified as employed, unemployed, or not in the labor force. Those who hold more than one job are classified according to the job at which they worked the most hours.

People are classified as *employed* if they did any work at all as paid civilians; worked in their own business or profession or on their own farm; or worked 15 hours or more in an enterprise operated by a member of their family, whether they were paid or not. People are also counted as employed if they were on unpaid leave because of illness, bad weather, disputes between labor and management, or personal reasons. Members of the Armed Forces stationed in the United States are also included in the employed total.

People are classified as *unemployed*, regardless of their eligibility for unemployment benefits or public assistance, if they meet all of the following criteria: They had no employment during the survey week; they were available for work at that time; and they made specific efforts to find employment sometime during the prior 4 weeks. Persons laid off from their former jobs and awaiting recall and those expecting to report to a job within 30 days need not be looking for work to be counted as unemployed.

The *labor force* equals the sum of the number employed and the number unemployed. The ***unemployment rate*** is the percentage of unemployed people in the labor force (civilian plus the resident Armed Forces). Table A-5 presents a special grouping of seven measures of unemployment based on varying definitions of unemployment and the labor force. The definitions are provided in the table. The most restrictive definition yields U-1 and the most comprehensive yields U-7. The overall unemployment rate is U-5a, while U-5b represents the same measure with a civilian labor force base.

Unlike the household survey, the establishment survey only counts wage and salary employees whose names appear on the payroll records of nonagricultural firms. As a result, there are many differences between the two surveys, among which are the following:

- The household survey, although based on a smaller sample, reflects a larger segment of the population; the establishment survey excludes agriculture, the self-employed, unpaid family workers, private household workers, and members of the resident Armed Forces.

- The household survey includes people on unpaid leave among the employed; the establishment survey does not.

- The household survey is limited to those 16 years of age and older; the establishment survey is not limited by age.

- The household survey has no duplication of individuals, because each individual is counted only once; in the establishment survey, employees working at more than one job or otherwise appearing on more than one payroll would be counted separately for each appearance.

Other differences between the two surveys are described in "Comparing Employment Estimates from Household and Payroll Surveys," which may be obtained from the BLS upon request.

Seasonal adjustment

Over the course of a year, the size of the Nation's labor force and the levels of employment and unemployment undergo sharp fluctuations due to such seasonal events as changes in weather, reduced or expanded production, harvests, major holidays, and the opening and closing of schools. For example, the labor force increases by a large number each June, when schools close and many young people enter the job market. The effect of such seasonal variation can be very large; over the course of a year, for example, seasonality may account for as much as 95 percent of the month-to-month changes in unemployment.

Because these seasonal events follow a more or less regular pattern each year, their influence on statistical trends can be eliminated by adjusting the statistics from month to month. These adjustments make nonseasonal developments, such as declines in economic activity or increases in the participation of women in the labor force, easier to spot. To return to the school's-out example, the large number of people entering the labor force each June is likely to obscure any other changes that have taken place since May, making it difficult to determine if the level of economic activity has risen or declined. However, because the effect of students finishing school in previous years is known, the statistics for the current year can be adjusted to allow for a comparable change. Insofar as the seasonal adjustment is made correctly, the adjusted figure provides a more useful tool with which to analyze changes in economic activity.

Measures of labor force, employment, and unemployment contain components such as age and sex. Statistics for all employees, production workers, average weekly hours, and average hourly earnings include components based on the employer's industry. All these statistics can be seasonally adjusted either by adjusting the total or by adjusting each of the components and combining them. The second procedure usually yields more accurate information and is therefore followed by BLS. For example, the seasonally adjusted figure for the labor force is the sum of eight seasonally adjusted civilian employment components, plus the resident Armed Forces total (not adjusted for seasonality), and four seasonally adjusted unemployment components; the total for unemployment is the sum of the four unemployment components; and the overall unemployment rate is derived by dividing the resulting estimate of total unemployment by the estimate of the labor force.

The numerical factors used to make the seasonal adjustments are recalculated regularly. For the household survey, the factors are calculated for the January-June period and again for the July-December period. The January revision is applied to data that have been published over the previous 5 years. For the establishment survey, updated factors for seasonal adjustment are calculated only once a year, along with the introduction of new benchmarks which are discussed at the end of the next section.

Sampling variability

Statistics based on the household and establishment surveys are subject to sampling error, that is, the estimate of the number of people employed and the other estimates drawn from these surveys probably differ from the figures that would be obtained from a complete census, even if the same questionnaires and procedures were used. In the household survey, the amount of the differences can be expressed in terms of standard errors. The numerical value of a standard error depends upon the size of the sample, the results of the survey, and other factors. However, the numerical value is always such that the chances are approximately 68 out of 100 that an estimate based on the sample will differ by no more than the standard error from the results of a complete census. The chances are approximately 90 out of 100 that an estimate based on the sample wil differ by no more than 1.6 times the standard error from the results of a complete census. At approximately the 90-percent level of confidence—the confidence limits used by BLS in its analyses—the error for the monthly change in total employment is on the order of plus or minus 328,000; for total unemployment it is 220,000; and, for the overall unemployment rate, it is 0.19 percentage point. These figures do not mean that the sample results are off by these magnitudes but, rather, that the chances are approximately 90 out of 100 that the "true" level or rate would not be expected to differ from the estimates by more than these amounts.

Sampling errors for monthly surveys are reduced when the data are cumulated for several months, such as quarterly or annually. Also, as a general rule, the smaller the estimate, the larger the sampling error. Therefore, relatively speaking, the estimate of the size of the labor force is subject to less error than is the estimate of the number unemployed. And, among the unemployed, the sampling error for the jobless rate of adult men, for example, is much smaller than is the error for the jobless rate of teenagers. Specifically, the error on monthly change in the jobless rate for men is .26 percentage point; for teenagers, it is 1.25 percentage points.

In the establishment survey, estimates for the 2 most current months are based on incomplete returns; for this reason, these estimates are labeled preliminary in the tables. When all the returns in the sample have been received, the estimates are revised. In other words, data for the month of September are published in preliminary form in October and November and in final form in December. To remove errors that build up over time, a comprehensive count of the employed is conducted each year. The results of this survey are used to establish new benchmarks—comprehensive counts of employment—against which month-to-month changes can be measured. The new benchmarks also incorporate changes in the classification of industries and allow for the formation of new establishments.

Additional statistics and other information

In order to provide a broad view of the Nation's employment situation, BLS regularly publishes a wide variety of data in this news release. More comprehensive statistics are contained in *Employment and Earnings*, published each month by BLS. It is available for $8.50 per issue or $22.00 per year from the U.S. Government Printing Office, Washington, D.C., 20204. A check or money order made out to the Superintendent of Documents must accompany all orders.

Employment and Earnings also provides approximations of the standard errors for the household survey data published in this release. For unemployment and other labor force categories, the standard errors appear in tables B through J of its "Explanatory Notes." Measures of the reliability of the data drawn from the establishment survey and the actual amounts of revision due to benchmark adjustments are provided in tables M, O, P, and Q of that publication.

Table A-1. Employment status of the population, including Armed Forces in the United States, by sex

(Numbers in thousands)

Employment status and sex	Not seasonally adjusted			Seasonally adjusted[1]					
	June 1986	May 1987	June 1987	June 1986	Feb. 1987	Mar. 1987	Apr. 1987	May 1987	June 1987
TOTAL									
Noninstitutional population[2]	182,183	186,259	186,421	182,183	183,738	183,915	184,079	186,259	186,421
Labor force[2]	121,324	121,421	122,871	119,685	121,089	120,958	121,070	121,719	121,235
Participation rate[3]	66.6	65.9	66.4	65.7	65.9	65.8	65.8	65.3	65.0
Total employed[2]	112,549	114,103	115,216	111,293	113,122	113,104	113,570	114,173	113,975
Employment-population ratio[4]	61.8	61.9	62.5	61.1	61.6	61.5	61.7	61.3	61.1
Resident Armed Forces	1,680	1,726	1,718	1,680	1,740	1,736	1,735	1,726	1,718
Civilian employed	110,869	112,377	113,498	109,613	111,382	111,368	111,835	112,447	112,257
Agriculture	3,651	3,541	3,661	3,164	3,236	3,284	3,290	3,335	3,178
Nonagricultural industries	107,218	108,836	109,837	106,449	108,146	108,084	108,545	109,112	109,079
Unemployed	8,775	7,318	7,655	8,392	7,967	7,854	7,500	7,546	7,260
Unemployment rate[5]	7.2	6.0	6.2	7.0	6.6	6.5	6.2	6.2	6.0
Not in labor force	60,859	62,838	61,550	62,498	62,649	62,957	63,009	64,540	65,187
Men, 16 years and over									
Noninstitutional population[2]	87,288	88,361	88,442	87,288	88,099	88,186	88,271	88,361	88,442
Labor force[2]	68,203	67,738	68,803	66,957	67,764	67,644	67,603	67,816	67,556
Participation rate[3]	78.1	76.7	77.8	76.7	76.9	76.7	76.6	76.7	76.4
Total employed[2]	63,485	63,660	64,604	62,518	63,335	63,282	63,417	63,562	63,471
Employment-population ratio[4]	72.7	72.0	73.0	71.6	71.9	71.8	71.8	71.9	71.8
Resident Armed Forces	1,525	1,566	1,559	1,525	1,584	1,575	1,575	1,566	1,559
Civilian employed	61,960	62,094	63,045	60,993	61,751	61,707	61,842	61,996	61,912
Unemployed	4,718	4,078	4,199	4,619	4,429	4,362	4,186	4,254	4,085
Unemployment rate[5]	6.9	6.0	6.1	6.9	6.5	6.4	6.2	6.3	6.0
Women, 16 years and over									
Noninstitutional population[2]	94,895	95,898	95,979	94,895	95,639	95,729	95,808	95,898	95,979
Labor force[2]	53,121	53,683	54,068	52,748	53,325	53,314	53,467	53,903	53,679
Participation rate[3]	56.0	56.0	56.3	55.6	55.8	55.7	55.8	56.2	55.9
Total employed[2]	49,064	50,443	50,612	48,975	49,787	49,822	50,153	50,611	50,504
Employment-population ratio[4]	51.7	52.6	52.7	51.6	52.1	52.0	52.3	52.8	52.6
Resident Armed Forces	155	160	159	155	156	161	160	160	159
Civilian employed	48,909	50,283	50,453	48,820	49,631	49,661	49,993	50,451	50,345
Unemployed	4,057	3,240	3,456	3,773	3,538	3,492	3,314	3,292	3,175
Unemployment rate[5]	7.6	6.0	6.4	7.2	6.6	6.6	6.2	6.1	5.9

---

[1] The population and Armed Forces figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

[2] Includes members of the Armed Forces stationed in the United States.

[3] Labor force as a percent of the noninstitutional population.

[4] Total employment as a percent of the noninstitutional population.

[5] Unemployment as a percent of the labor force (including the resident Armed Forces).

Table A-2. Employment status of the civilian population by sex and age

(Numbers in thousands)

Employment status, sex, and age	Not seasonally adjusted			Seasonally adjusted[1]					
	June 1986	May 1987	June 1987	June 1986	Feb. 1987	Mar. 1987	Apr. 1987	May 1987	June 1987
TOTAL									
Civilian noninstitutional population	180,503	182,533	182,703	180,503	181,998	182,179	182,344	182,533	182,703
Civilian labor force	119,644	119,695	121,153	118,005	119,349	119,222	119,335	119,993	119,517
Participation rate	66.3	65.6	66.3	65.4	65.6	65.4	65.4	65.7	65.4
Employed	110,869	112,377	113,498	109,613	111,382	111,368	111,835	112,447	112,257
Employment population ratio[2]	61.4	61.6	62.1	60.7	61.2	61.1	61.3	61.6	61.4
Unemployed	8,775	7,318	7,655	8,392	7,967	7,854	7,500	7,546	7,260
Unemployment rate	7.3	6.1	6.3	7.1	6.7	6.6	6.3	6.3	6.1
Men, 20 years and over									
Civilian noninstitutional population	78,484	79,474	79,536	78,484	79,216	79,303	79,387	79,474	79,536
Civilian labor force	61,779	62,147	62,503	61,330	61,973	61,983	61,976	62,156	62,057
Participation rate	78.7	78.2	78.6	78.1	78.2	78.2	78.1	78.2	78.0
Employed	58,105	58,828	59,184	57,522	58,325	58,410	58,567	58,721	58,620
Employment population ratio[2]	74.0	74.0	74.4	73.3	73.6	73.7	73.8	73.9	73.7
Agriculture	2,533	2,548	2,533	2,309	2,300	2,411	2,411	2,441	2,307
Nonagricultural industries	55,572	56,280	56,651	55,213	56,024	55,999	56,155	56,280	56,313
Unemployed	3,674	3,319	3,320	3,808	3,648	3,573	3,409	3,436	3,437
Unemployment rate	5.9	5.3	5.3	6.2	5.9	5.8	5.5	5.5	5.5
Women, 20 years and over									
Civilian noninstitutional population	87,547	88,464	88,546	87,547	88,237	88,321	88,395	88,464	88,546
Civilian labor force	48,510	49,725	49,502	48,739	49,348	49,355	49,466	49,774	49,714
Participation rate	55.4	56.2	55.9	55.7	55.9	55.9	56.0	56.3	56.1
Employed	45,408	47,104	46,896	45,657	46,475	46,498	46,751	47,094	47,126
Employment population ratio[2]	51.9	53.2	53.0	52.2	52.7	52.6	52.9	53.2	53.2
Agriculture	679	690	711	583	641	589	587	634	615
Nonagricultural industries	44,730	46,414	46,186	45,074	45,835	45,909	46,164	46,460	46,512
Unemployed	3,101	2,621	2,606	3,082	2,873	2,857	2,715	2,680	2,588
Unemployment rate	6.4	5.3	5.3	6.3	5.8	5.8	5.5	5.4	5.2
Both sexes, 16 to 19 years									
Civilian noninstitutional population	14,472	14,595	14,621	14,472	14,546	14,555	14,562	14,595	14,621
Civilian labor force	9,356	7,823	9,147	7,936	8,028	7,884	7,894	8,063	7,746
Participation rate	64.6	53.6	62.6	54.8	55.2	54.2	54.2	55.2	53.0
Employed	7,356	6,445	7,418	6,434	6,582	6,460	6,518	6,633	6,511
Employment population ratio[2]	50.8	44.2	50.7	44.5	45.2	44.4	44.8	45.4	44.5
Agriculture	439	303	418	272	295	284	292	261	257
Nonagricultural industries	6,917	6,142	7,000	6,162	6,287	6,176	6,226	6,372	6,254
Unemployed	2,000	1,378	1,729	1,502	1,446	1,424	1,376	1,430	1,235
Unemployment rate	21.4	17.6	18.9	18.9	18.0	18.1	17.4	17.7	15.9

[1] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

[2] Civilian employment as a percent of the civilian noninstitutional population.

Table A-3. Employment status of the civilian population by race, sex, age, and Hispanic origin

(Numbers in thousands)

Employment status, race, sex, age, and Hispanic origin	Not seasonally adjusted			Seasonally adjusted[1]					
	June 1986	May 1987	June 1987	June 1986	Feb. 1987	Mar. 1987	Apr. 1987	May 1987	June 1987
WHITE									
Civilian noninstitutional population	155,376	156,811	156,930	155,376	156,431	156,561	156,676	156,811	156,730
Civilian labor force	103,253	103,271	104,409	101,946	102,893	102,797	102,894	103,573	103,106
Participation rate	66.5	65.9	66.5	65.6	65.8	65.7	65.7	66.1	65.7
Employed	96,823	97,908	98,796	95,720	96,995	96,998	97,340	98,050	97,716
Employment-population ratio[2]	62.3	62.4	63.0	61.6	62.0	62.0	62.1	62.5	62.3
Unemployed	6,430	5,363	5,613	6,226	5,898	5,799	5,554	5,526	5,390
Unemployment rate	6.2	5.2	5.4	6.1	5.7	5.6	5.4	5.3	5.2
Men, 20 years and over									
Civilian labor force	54,043	54,282	54,605	53,651	54,175	54,107	54,051	54,314	54,213
Participation rate	79.0	78.6	79.0	78.5	78.6	78.4	78.3	78.6	78.4
Employed	51,297	51,807	52,097	50,762	51,362	51,364	51,462	51,755	51,581
Employment-population ratio[2]	75.0	75.0	75.3	74.2	74.5	74.5	74.6	74.9	74.6
Unemployed	2,746	2,474	2,508	2,889	2,813	2,743	2,589	2,558	2,632
Unemployment rate	5.1	4.6	4.6	5.4	5.2	5.1	4.8	4.7	4.9
Women, 20 years and over									
Civilian labor force	41,195	42,151	41,932	41,424	41,762	41,828	41,982	42,239	42,159
Participation rate	54.8	55.6	55.3	55.1	55.2	55.3	55.5	55.8	55.6
Employed	38,935	40,303	40,076	39,179	39,735	39,839	40,041	40,343	40,318
Employment-population ratio[2]	51.8	53.2	52.9	52.2	52.6	52.7	52.9	53.2	53.2
Unemployed	2,260	1,848	1,856	2,245	2,028	1,989	1,941	1,895	1,841
Unemployment rate	5.5	4.4	4.4	5.4	4.9	4.8	4.6	4.5	4.4
Both sexes, 16 to 19 years									
Civilian labor force	8,015	6,838	7,872	6,871	6,955	6,862	6,861	7,021	6,734
Participation rate	67.5	57.2	65.8	57.9	58.4	57.5	57.4	58.7	56.3
Employed	6,591	5,798	6,623	5,779	5,898	5,795	5,837	5,951	5,817
Employment-population ratio[2]	55.5	48.5	55.4	48.7	49.5	48.5	48.9	49.8	48.6
Unemployed	1,424	1,041	1,249	1,092	1,057	1,067	1,024	1,070	917
Unemployment rate	17.8	15.2	15.9	15.9	15.2	15.5	14.9	15.2	13.6
Men	18.1	16.3	16.0	17.1	16.0	17.1	16.7	17.3	14.5
Women	17.4	14.1	15.8	14.6	14.3	13.9	13.1	13.1	12.7
BLACK									
Civilian noninstitutional population	19,974	20,312	20,341	19,974	20,218	20,249	20,279	20,312	20,341
Civilian labor force	12,981	12,861	13,133	12,712	12,957	12,844	12,743	12,860	12,863
Participation rate	65.0	63.3	64.6	63.6	64.1	63.4	62.8	63.3	63.2
Employed	10,936	11,119	11,346	10,818	11,101	11,053	11,090	11,080	11,223
Employment-population ratio[2]	54.8	54.7	55.8	54.2	54.9	54.6	54.7	54.6	55.2
Unemployed	2,046	1,742	1,787	1,894	1,855	1,791	1,653	1,779	1,640
Unemployment rate	15.8	13.5	13.6	14.9	14.3	13.9	13.0	13.8	12.7
Men, 20 years and over									
Civilian labor force	6,007	6,051	6,063	5,948	6,012	5,997	5,980	6,033	6,001
Participation rate	76.0	75.2	75.2	75.3	75.1	74.8	74.4	75.0	74.5
Employed	5,218	5,311	5,375	5,157	5,238	5,305	5,328	5,279	5,311
Employment-population ratio[2]	66.0	66.0	66.7	65.3	66.0	66.1	66.3	65.6	65.9
Unemployed	790	740	688	791	724	692	652	754	690
Unemployment rate	13.2	12.2	11.3	13.3	12.0	11.5	10.9	12.5	11.5
Women, 20 years and over									
Civilian labor force	5,837	5,991	6,006	5,848	6,030	5,987	5,918	5,970	6,017
Participation rate	58.7	59.3	59.4	58.8	59.9	59.4	58.7	59.1	59.5
Employed	5,095	5,294	5,338	5,107	5,255	5,211	5,238	5,278	5,349
Employment-population ratio[2]	51.3	52.4	52.8	51.4	52.2	51.7	51.9	52.2	52.9
Unemployed	742	697	668	741	775	776	680	691	669
Unemployment rate	12.7	11.6	11.1	12.7	12.9	13.0	11.5	11.6	11.1
Both sexes, 16 to 19 years									
Civilian labor force	1,137	819	1,064	916	915	861	845	857	844
Participation rate	53.3	37.9	49.1	42.9	42.6	40.0	39.2	39.7	39.0
Employed	623	514	633	554	559	537	524	523	563
Employment-population ratio[2]	29.2	23.8	29.2	26.0	26.0	24.9	24.3	24.2	26.0
Unemployed	514	305	431	362	356	324	321	334	281
Unemployment rate	45.2	37.3	40.5	39.5	38.9	37.6	38.0	39.0	33.3
Men	42.7	38.0	36.4	39.7	38.3	36.5	39.3	40.3	31.5
Women	47.8	36.5	44.7	39.4	39.5	38.8	36.5	37.6	35.1
HISPANIC ORIGIN									
Civilian noninstitutional population	12,326	12,809	12,848	12,326	12,692	12,732	12,770	12,809	12,848
Civilian labor force	8,191	8,506	8,567	8,085	8,457	8,392	8,484	8,584	8,452
Participation rate	66.5	66.4	66.7	65.6	66.6	65.9	66.4	67.0	65.8
Employed	7,331	7,791	7,846	7,224	7,644	7,639	7,701	7,838	7,730
Employment-population ratio[2]	59.5	60.8	61.1	58.6	60.2	60.0	60.3	61.2	60.2
Unemployed	860	715	721	861	813	753	783	748	722
Unemployment rate	10.5	8.4	8.4	10.6	9.6	9.0	9.2	8.7	8.5

---

[1] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

[2] Civilian employment as a percent of the civilian noninstitutional population.

NOTE: Detail for the above race and Hispanic-origin groups will not sum to totals because data for the "other races" group are not presented and Hispanics are included in both the white and black population groups.

Table A-4. Selected employment indicators

(Numbers in thousands)

Category	Not seasonally adjusted			Seasonally adjusted					
	June 1986	May 1987	June 1987	June 1986	Feb. 1987	Mar. 1987	Apr. 1987	May 1987	June 1987
CHARACTERISTIC									
Civilian employed, 16 years and over	110,869	112,377	113,498	109,611	111,282	111,368	111,675	112,442	112,257
Married men, spouse present	39,824	40,189	40,257	39,613	39,913	40,100	39,967	40,029	40,057
Married women, spouse present	26,818	28,410	27,974	27,154	27,817	27,965	28,213	28,495	28,458
Women who maintain families	5,766	6,051	5,987	5,719	5,904	5,933	5,972	5,921	5,919
MAJOR INDUSTRY AND CLASS OF WORKER									
Agriculture:									
Wage and salary workers	1,811	1,846	1,937	1,608	1,647	1,719	1,589	1,695	1,616
Self-employed workers	1,629	1,501	1,516	1,492	1,454	1,418	1,505	1,442	1,386
Unpaid family workers	211	194	211	163	126	150	175	170	165
Nonagricultural industries:									
Wage and salary workers	99,173	100,475	101,264	98,314	99,748	99,834	100,112	100,814	100,420
Government	15,945	16,910	16,515	16,377	16,532	16,568	16,484	16,710	16,956
Private industries	83,227	83,566	84,749	81,937	83,216	83,265	83,628	84,124	83,464
Private households	1,374	1,265	1,242	1,267	1,204	1,227	1,266	1,266	1,146
Other industries	81,853	82,301	83,507	80,670	82,012	82,038	82,362	82,858	82,318
Self-employed workers	7,799	8,093	8,286	7,832	8,187	8,050	8,117	8,142	8,229
Unpaid family workers	247	268	287	236	251	273	268	275	274
PERSONS AT WORK PART TIME[1]									
All industries:									
Part time for economic reasons	6,118	5,139	5,723	5,538	5,780	5,456	5,191	5,282	5,184
Slack work	2,546	2,156	2,234	2,437	2,535	2,440	2,372	2,223	2,317
Could only find part-time work	3,225	2,561	3,053	2,513	2,828	2,698	2,766	2,665	2,519
Voluntary part time	12,470	15,243	13,278	14,142	14,061	14,167	13,862	14,575	15,056
Nonagricultural industries:									
Part time for economic reasons	5,841	4,858	5,395	5,322	5,459	5,164	5,110	5,029	4,918
Slack work	2,220	2,013	2,075	2,307	2,340	2,218	2,137	2,071	2,155
Could only find part-time work	3,198	2,425	2,907	2,727	2,742	2,595	2,462	2,596	2,477
Voluntary part time	11,960	14,660	12,718	13,613	13,597	13,682	13,399	14,069	14,485

[1] Excludes persons "with a job but not at work" during the survey period for such reasons as vacation, illness, or industrial dispute.

Table A-5. Range of unemployment measures based on varying definitions of unemployment and the labor force, seasonally adjusted

(Percent)

Measure	Quarterly averages					Monthly data		
	1986			1987		1987		
	II	III	IV	I	II	Apr.	May	June
U-1 Persons unemployed 15 weeks or longer as a percent of the civilian labor force	1.9	1.9	1.8	1.8	1.7	1.7	1.8	1.7
U-2 Job losers as a percent of the civilian labor force	3.5	3.4	3.3	3.3	3.0	3.1	3.0	3.0
U-3 Unemployed persons 25 years and over as a percent of the civilian labor force	5.5	5.4	5.4	5.1	4.7	4.8	4.8	4.6
U-4 Unemployed full-time jobseekers as a percent of the full-time civilian labor force	6.8	6.6	6.5	6.3	5.9	5.9	5.9	5.9
U-5a Total unemployed as a percent of the labor force, including the resident Armed Forces	7.0	6.8	6.8	6.6	6.1	6.2	6.2	6.0
U-5b Total unemployed as a percent of the civilian labor force	7.1	6.9	6.9	6.7	6.2	6.3	6.3	6.1
U-6 Total full-time jobseekers plus ½ part-time jobseekers plus ½ total on part time for economic reasons as a percent of the civilian labor force less ½ of the part time labor force	9.4	9.3	9.2	9.0	8.4	8.5	8.5	8.3
U-7 Total full-time jobseekers plus ½ part-time jobseekers plus ½ total on part time for economic reasons plus discouraged workers as a percent of the civilian labor force plus discouraged workers less ½ of the part time labor force	10.5	10.2	10.2	10.0	9.3	N.A.	N.A.	N.A.

N.A. = not available.

HOUSEHOLD DATA

Table A-6. Selected unemployment indicators, seasonally adjusted

Category	Number of unemployed persons (in thousands)			Unemployment rates[1]					
	June 1986	May 1987	June 1987	June 1986	Feb. 1987	Mar. 1987	Apr. 1987	May 1987	June 1987
CHARACTERISTIC									
Total, 16 years and over	8,392	7,546	7,260	7.1	6.7	6.6	6.3	6.3	6.1
Men, 16 years and over	4,619	4,254	4,085	7.1	6.7	6.6	6.3	6.4	6.2
Men, 20 years and over	3,808	3,436	3,437	6.2	5.9	5.8	5.5	5.5	5.5
Women, 16 years and over	3,773	3,292	3,175	7.2	6.7	6.6	6.2	6.1	5.9
Women, 20 years and over	3,082	2,689	2,588	6.3	5.8	5.8	5.5	5.4	5.2
Both sexes, 16 to 19 years	1,502	1,430	1,235	18.9	18.0	18.1	17.4	17.7	15.9
Married men, spouse present	1,862	1,631	1,678	4.5	4.2	4.1	4.1	3.9	4.0
Married women, spouse present	1,488	1,231	1,171	5.2	4.8	4.5	4.4	4.1	4.0
Women who maintain families	636	630	635	10.0	9.5	9.7	9.3	9.6	9.7
Full-time workers	6,798	6,052	5,998	6.7	6.3	6.2	5.9	5.9	5.9
Part-time workers	1,550	1,521	1,218	9.1	8.7	9.2	8.6	8.7	6.9
Labor force time lost[2]	--	--	--	8.1	7.6	7.4	7.3	7.2	7.1
INDUSTRY									
Nonagricultural private wage and salary workers	6,264	5,650	5,477	7.1	6.6	6.5	6.2	6.3	6.2
Mining	179	101	95	17.3	12.4	9.3	11.1	12.9	10.8
Construction	767	753	726	12.4	11.6	12.5	11.9	12.1	11.6
Manufacturing	1,590	1,406	1,201	7.2	6.8	6.9	6.2	6.4	5.6
Durable goods	915	815	682	7.0	6.8	6.7	6.2	6.3	5.3
Nondurable goods	675	591	519	7.5	6.9	7.3	6.2	6.6	6.0
Transportation and public utilities	327	275	307	5.4	4.0	4.6	4.8	4.4	5.0
Wholesale and retail trade	1,747	1,596	1,638	7.7	7.2	7.3	7.0	6.9	7.2
Finance and service industries	1,654	1,519	1,510	5.5	5.4	4.9	4.7	4.8	4.8
Government workers	613	571	601	3.6	3.7	3.4	3.6	3.3	3.4
Agricultural wage and salary workers	230	161	156	13.2	11.2	10.7	9.0	8.7	8.8

[1] Unemployment as a percent of the civilian labor force.

[2] Aggregate hours lost by the unemployed and persons on part time for economic reasons as a percent of potentially available labor force hours.

Table A-7. Duration of unemployment

(Numbers in thousands)

Weeks of unemployment	Not seasonally adjusted			Seasonally adjusted					
	June 1986	May 1987	June 1987	June 1986	Feb. 1987	Mar. 1987	Apr. 1987	May 1987	June 1987
DURATION									
Less than 5 weeks	4,169	3,255	3,754	3,415	3,361	3,383	3,143	3,349	3,085
5 to 14 weeks	2,321	1,798	1,856	2,650	2,477	2,447	2,232	2,118	2,114
15 weeks and over	2,285	2,265	2,045	2,299	2,131	2,050	2,075	2,101	2,055
15 to 26 weeks	1,014	1,105	979	1,038	1,008	945	1,025	1,003	998
27 weeks and over	1,271	1,160	1,067	1,261	1,123	1,105	1,049	1,098	1,057
Average (mean) duration, in weeks	14.5	15.5	14.2	15.2	14.6	14.9	14.9	14.9	14.8
Median duration, in weeks	5.6	6.6	5.2	7.2	6.6	6.6	7.0	6.5	6.7
PERCENT DISTRIBUTION									
Total unemployed	100.0	100.0	100.0	120.0	100.0	100.0	100.0	100.0	100.0
Less than 5 weeks	47.5	44.5	49.0	40.8	42.2	42.9	42.2	44.3	42.5
5 to 14 weeks	26.5	24.6	24.2	31.7	31.1	31.1	30.0	28.0	29.1
15 weeks and over	26.0	31.0	26.7	27.5	26.7	26.0	27.9	27.8	28.3
15 to 26 weeks	11.6	15.1	12.8	12.4	12.7	12.0	13.8	13.2	13.8
27 weeks and over	14.5	15.9	13.9	15.1	14.1	14.0	14.1	14.5	14.6

Table A-8. Reason for unemployment

(Numbers in thousands)

Reason	Not seasonally adjusted			Seasonally adjusted					
	June 1986	May 1987	June 1987	June 1986	Feb. 1987	Mar. 1987	Apr. 1987	May 1987	June 1987
NUMBER OF UNEMPLOYED									
Job losers	3,942	3,412	3,305	4,272	3,839	3,822	3,732	3,611	3,565
On layoff	927	815	776	1,074	998	1,011	958	906	901
Other job losers	3,035	2,597	2,529	3,198	2,842	2,811	2,774	2,705	2,664
Job leavers	948	830	896	1,009	1,046	1,000	923	906	949
Reentrants	2,322	2,044	2,162	2,107	2,042	2,111	1,940	2,018	1,969
New entrants	1,543	1,033	1,292	1,050	1,040	956	911	1,018	798
PERCENT DISTRIBUTION									
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Job losers	45.2	46.6	43.1	50.6	48.2	48.4	49.7	47.8	49.0
On layoff	10.6	11.1	10.1	12.7	12.5	12.8	12.8	12.0	12.4
Other job losers	34.6	35.5	33.0	37.9	35.7	35.6	37.0	35.8	36.6
Job leavers	10.8	11.3	11.7	12.0	13.1	12.7	12.3	12.0	13.0
Reentrants	26.5	27.9	28.2	25.0	25.6	26.8	25.8	26.7	27.0
New entrants	17.6	14.1	16.9	12.4	13.1	12.1	12.1	13.5	11.0
UNEMPLOYED AS A PERCENT OF THE CIVILIAN LABOR FORCE									
Job losers	3.3	2.9	2.7	3.6	3.2	3.2	3.1	3.0	3.0
Job leavers	.8	.7	.7	.9	.9	.8	.8	.8	.8
Reentrants	1.9	1.7	1.8	1.8	1.7	1.8	1.6	1.7	1.6
New entrants	1.3	.9	1.1	.9	.9	.8	.8	.8	.7

Table A-9. Unemployed persons by sex and age, seasonally adjusted

Sex and age	Number of unemployed persons (in thousands)			Unemployment rates[1]					
	June 1986	May 1987	June 1987	June 1986	Feb. 1987	Mar. 1987	Apr. 1987	May 1987	June 1987
Total, 16 years and over	8,392	7,546	7,260	7.1	6.7	6.6	6.3	6.3	6.1
16 to 24 years	3,157	2,912	2,768	13.5	13.1	12.9	12.6	12.6	12.2
16 to 19 years	1,502	1,430	1,235	18.9	18.0	18.1	17.4	17.7	15.9
16 to 17 years	681	734	617	20.7	20.3	20.0	19.2	21.4	18.8
18 to 19 years	813	696	609	17.5	16.6	16.5	16.3	15.8	13.7
20 to 24 years	1,655	1,482	1,533	10.7	10.5	10.2	10.1	9.8	10.2
25 years and over	5,212	4,621	4,454	5.5	5.1	5.1	4.8	4.8	4.6
25 to 54 years	4,677	4,102	4,013	5.9	5.5	5.4	5.0	5.0	4.9
55 years and over	569	548	474	3.8	3.0	3.4	3.4	3.7	3.2
Men, 16 years and over	4,619	4,254	4,085	7.1	6.7	6.6	6.3	6.4	6.2
16 to 24 years	1,699	1,604	1,485	13.9	13.6	13.2	13.2	13.4	12.6
16 to 19 years	811	818	648	19.9	18.6	19.3	19.2	20.0	16.4
16 to 17 years	377	407	312	20.0	21.2	20.2	21.5	23.2	18.7
18 to 19 years	463	412	324	19.4	17.0	18.6	17.5	17.7	14.6
20 to 24 years	888	786	837	10.9	11.1	10.1	10.1	10.0	10.7
25 years and over	2,885	2,636	2,563	5.4	5.1	5.1	4.8	4.9	4.7
25 to 54 years	2,551	2,299	2,285	5.7	5.6	5.4	5.0	5.1	5.0
55 years and over	363	363	305	4.1	3.3	3.6	3.7	4.1	3.4
Women, 16 years and over	3,773	3,292	3,175	7.2	6.7	6.6	6.2	6.1	5.9
16 to 24 years	1,458	1,308	1,284	13.0	12.4	12.5	12.0	11.7	11.7
16 to 19 years	691	612	587	17.9	17.4	16.7	15.6	15.4	15.6
16 to 17 years	344	327	305	21.4	19.2	19.7	16.7	19.6	18.9
18 to 19 years	350	284	285	15.6	16.1	14.2	15.1	12.4	13.0
20 to 24 years	767	696	697	10.4	9.8	10.3	10.1	9.7	9.7
25 years and over	2,327	1,985	1,891	5.6	5.1	5.0	4.7	4.7	4.4
25 to 54 years	2,126	1,803	1,729	6.0	5.6	5.4	5.0	4.9	4.7
55 years and over	206	185	170	3.3	2.6	3.2	3.0	3.0	2.8

[1] Unemployment as a percent of the civilian labor force.

Table A-10. Employment status of black and other workers

(Numbers in thousands)

Employment status	Not seasonally adjusted			Seasonally adjusted[1]					
	June 1986	May 1987	June 1987	June 1986	Feb. 1987	Mar. 1987	Apr. 1987	May 1987	June 1987
Civilian noninstitutional population	25,127	25,723	25,773	25,127	25,567	25,618	25,667	25,723	25,773
Civilian labor force	16,391	16,424	16,744	16,088	16,407	16,455	16,394	16,464	16,439
Participation rate	65.2	63.9	65.0	64.0	64.2	64.2	63.9	64.0	63.8
Employed	14,046	14,469	14,702	13,914	14,306	14,391	14,468	14,454	14,566
Employment-population ratio[2]	55.9	56.2	57.0	55.4	56.0	56.2	56.4	56.2	56.5
Unemployed	2,345	1,955	2,041	2,174	2,101	2,064	1,925	2,011	1,873
Unemployment rate	14.3	11.9	12.2	13.5	12.8	12.5	11.7	12.2	11.4
Not in labor force	9,736	9,298	9,029	9,039	9,160	9,163	9,273	9,259	9,334

[1] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

[2] Civilian employment as a percent of the civilian noninstitutional population.

Table A-11. Occupational status of the employed and unemployed, not seasonally adjusted

(Numbers in thousands)

Occupation	Civilian employed		Unemployed		Unemployment rate	
	June 1986	June 1987	June 1986	June 1987	June 1986	June 1987
Total, 16 years and over[1]	110,869	113,498	8,775	7,655	7.3	6.3
Managerial and professional specialty	26,185	27,233	653	662	2.4	2.4
Executive, administrative, and managerial	12,641	13,246	342	338	2.6	2.5
Professional specialty	13,544	13,988	311	324	2.2	2.3
Technical, sales, and administrative support	34,512	35,386	1,823	1,661	5.0	4.5
Technicians and related support	3,366	3,405	110	94	3.2	2.7
Sales occupations	13,463	13,703	811	698	5.7	4.8
Administrative support, including clerical	17,683	18,278	902	869	4.9	4.5
Service occupations	14,557	15,219	1,339	1,298	8.4	7.9
Private household	1,060	917	72	53	6.4	5.5
Protective service	1,845	2,003	82	120	4.3	5.6
Service, except private household and protective	11,651	12,300	1,184	1,125	9.2	8.4
Precision production, craft, and repair	13,773	13,695	987	865	6.7	5.9
Mechanics and repairers	4,399	4,389	232	178	5.0	3.9
Construction trades	5,239	5,087	460	460	8.1	8.3
Other precision production, craft, and repair	4,135	4,218	296	227	6.7	5.1
Operators, fabricators, and laborers	17,650	17,755	2,092	1,626	10.6	8.4
Machine operators, assemblers, and inspectors	8,074	8,024	930	697	10.3	8.0
Transportation and material moving occupations	4,710	4,750	421	315	8.2	6.2
Handlers, equipment cleaners, helpers, and laborers	4,866	4,981	741	614	13.2	11.0
Construction laborers	803	855	187	156	18.9	15.5
Other handlers, equipment cleaners, helpers, and laborers	4,064	4,126	554	458	12.0	10.0
Farming, forestry, and fishing	4,193	4,210	278	225	6.2	5.1

[1] Persons with no previous work experience and those whose last job was in the Armed Forces are included in the unemployed total.

Table A-12. Employment status of male Vietnam-era veterans and nonveterans by age, not seasonally adjusted

(Numbers in thousands)

Veteran status and age	Civilian noninstitutional population		Civilian labor force							
			Total		Employed		Unemployed			
							Number		Percent of labor force	
	June 1986	June 1987	June 1986	June 1987	June 1986	June 1987	June 1986	June 1987	June 1986	June 1987
VIETNAM-ERA VETERANS										
Total, 30 years and over	7,742	7,840	7,210	7,235	6,872	6,901	338	334	4.7	4.6
30 to 44 years	6,391	6,235	6,116	5,956	5,818	5,663	298	293	4.9	4.9
30 to 34 years	1,155	935	1,088	881	1,009	794	79	87	7.3	9.9
35 to 39 years	3,086	2,626	2,961	2,523	2,818	2,399	143	124	4.8	4.9
40 to 44 years	2,150	2,674	2,067	2,552	1,991	2,470	76	82	3.7	3.2
45 years and over	1,351	1,605	1,094	1,279	1,054	1,238	40	41	3.7	3.2
NONVETERANS										
Total, 30 to 44 years	18,356	19,414	17,383	18,343	16,444	17,554	939	789	5.4	4.3
30 to 34 years	8,545	8,843	8,158	8,476	7,698	8,067	460	409	5.6	4.8
35 to 39 years	5,666	6,184	5,365	5,785	5,088	5,584	277	201	5.2	3.5
40 to 44 years	4,145	4,387	3,860	4,082	3,658	3,903	202	179	5.2	4.4

NOTE: Male Vietnam-era veterans are men who served in the Armed Forces between August 5, 1964 and May 7, 1975. Nonveterans are men who have never served in the Armed Forces; published data are limited to those 30 to 44 years of age, the group that most closely corresponds to the bulk of the Vietnam-era veteran population.

HOUSEHOLD DATA

Table A-13. Employment status of the civilian population for eleven large States

(Numbers in thousands)

State and employment status	Not seasonally adjusted[1]			Seasonally adjusted[2]					
	June 1986	May 1987	June 1987	June 1986	Feb. 1987	Mar. 1987	Apr. 1987	May 1987	June 1987
California									
Civilian noninstitutional population	20,098	20,516	20,553	20,098	20,401	20,440	20,477	20,516	20,553
Civilian labor force	13,453	13,807	13,830	13,368	13,626	13,655	13,761	13,917	13,742
Employed	12,582	13,040	13,079	12,492	12,779	12,833	12,959	13,070	12,989
Unemployed	872	767	751	876	847	822	802	847	753
Unemployment rate	6.5	5.6	5.4	6.6	6.2	6.0	5.8	6.1	5.5
Florida									
Civilian noninstitutional population	9,161	9,398	9,419	9,161	9,333	9,355	9,376	9,398	9,419
Civilian labor force	5,668	5,879	5,883	5,626	5,775	5,853	5,837	5,881	5,844
Employed	5,325	5,581	5,570	5,301	5,446	5,524	5,515	5,562	5,550
Unemployed	343	297	313	325	329	329	322	319	294
Unemployment rate	6.0	5.1	5.3	5.8	5.7	5.6	5.5	5.4	5.0
Illinois									
Civilian noninstitutional population	8,659	8,682	8,684	8,659	8,676	8,678	8,680	8,682	8,684
Civilian labor force	5,805	5,687	5,818	5,717	5,633	5,620	5,652	5,680	5,727
Employed	5,317	5,221	5,366	5,252	5,199	5,186	5,186	5,201	5,297
Unemployed	489	466	452	465	434	434	466	479	430
Unemployment rate	8.4	8.2	7.8	8.1	7.7	7.7	8.2	8.4	7.5
Massachusetts									
Civilian noninstitutional population	4,552	4,570	4,571	4,552	4,565	4,567	4,568	4,570	4,571
Civilian labor force	3,054	3,053	3,137	3,030	3,040	3,074	3,070	3,069	3,114
Employed	2,941	2,950	3,040	2,917	2,935	2,953	2,947	2,954	3,015
Unemployed	113	103	97	113	105	121	123	115	99
Unemployment rate	3.7	3.4	3.1	3.7	3.5	3.9	4.0	3.7	3.2
Michigan									
Civilian noninstitutional population	6,858	6,920	6,925	6,858	6,903	6,909	6,914	6,920	6,925
Civilian labor force	4,428	4,519	4,575	4,363	4,474	4,500	4,466	4,486	4,514
Employed	4,012	4,150	4,166	3,965	4,092	4,138	4,081	4,124	4,126
Unemployed	416	368	408	398	382	362	385	362	388
Unemployment rate	9.4	8.2	8.9	9.1	8.5	8.0	8.6	8.1	8.6
New Jersey									
Civilian noninstitutional population	5,921	5,977	5,981	5,921	5,961	5,966	5,971	5,977	5,981
Civilian labor force	3,981	4,029	4,029	3,928	3,908	3,965	3,946	4,003	3,977
Employed	3,780	3,862	3,862	3,728	3,746	3,819	3,791	3,836	3,809
Unemployed	201	167	167	200	162	146	155	167	168
Unemployment rate	5.0	4.2	4.1	5.1	4.1	3.7	3.9	4.2	4.2
New York									
Civilian noninstitutional population	13,732	13,774	13,777	13,732	13,762	13,766	13,769	13,774	13,777
Civilian labor force	8,492	8,318	8,554	8,468	8,484	8,511	8,473	8,491	8,535
Employed	7,984	7,937	8,162	7,965	8,065	8,108	8,062	8,082	8,145
Unemployed	508	381	392	503	419	403	411	409	390
Unemployment rate	6.0	4.6	4.6	5.9	4.9	4.7	4.9	4.8	4.6
North Carolina									
Civilian noninstitutional population	4,754	4,829	4,836	4,754	4,809	4,816	4,822	4,829	4,836
Civilian labor force	3,220	3,250	3,316	3,192	3,290	3,264	3,267	3,240	3,292
Employed	3,042	3,114	3,155	3,030	3,122	3,107	3,112	3,101	3,143
Unemployed	177	136	162	162	168	157	155	139	149
Unemployment rate	5.5	4.2	4.9	5.1	5.1	4.8	4.7	4.3	4.5
Ohio									
Civilian noninstitutional population	8,106	8,131	8,133	8,106	8,124	8,127	8,128	8,131	8,133
Civilian labor force	5,267	5,264	5,293	5,204	5,303	5,215	5,223	5,294	5,237
Employed	4,809	4,892	4,909	4,752	4,848	4,824	4,846	4,878	4,859
Unemployed	458	372	384	452	455	391	377	416	378
Unemployment rate	8.7	7.1	7.3	8.7	8.6	7.5	7.2	7.9	7.2
Pennsylvania									
Civilian noninstitutional population	9,238	9,276	9,279	9,238	9,266	9,269	9,272	9,276	9,279
Civilian labor force	5,707	5,589	5,713	5,625	5,561	5,530	5,545	5,621	5,630
Employed	5,289	5,289	5,359	5,241	5,255	5,204	5,238	5,319	5,310
Unemployed	419	300	354	384	306	326	307	302	320
Unemployment rate	7.3	5.4	6.2	6.8	5.5	5.9	5.5	5.4	5.7
Texas									
Civilian noninstitutional population	11,980	12,192	12,211	11,980	12,136	12,154	12,172	12,192	12,211
Civilian labor force	8,259	8,458	8,483	8,149	8,315	8,134	8,267	8,511	8,372
Employed	7,347	7,731	7,667	7,331	7,592	7,494	7,552	7,778	7,656
Unemployed	913	728	816	819	723	640	715	733	716
Unemployment rate	11.1	8.6	9.6	10.0	8.7	7.9	8.6	8.6	8.6

[1] These are the official Bureau of Labor Statistics' estimates used in the administration of Federal fund allocation programs.

[2] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and the seasonally adjusted columns.

Table A-14. Persons not in labor force by reason, sex, and race, quarterly averages

(In thousands)

Reason, sex, and race	Not seasonally adjusted		Seasonally adjusted				
	1986	1987	1986			1987	
	II	II	II	III	IV	I	II
TOTAL							
Total not in labor force	62,601	62,795	62,693	62,664	62,807	62,800	62,912
Do not want a job now	56,530	56,651	56,838	56,865	57,013	57,094	57,025
Current activity: Going to school	5,834	5,711	6,513	6,189	6,330	6,428	6,446
Ill, disabled	4,181	4,319	4,040	4,087	3,928	4,152	4,168
Keeping house	26,745	25,750	26,487	26,176	26,000	26,290	25,488
Retired	15,396	16,348	15,326	15,885	16,069	15,768	16,266
Other	4,373	4,523	4,471	4,528	4,686	4,456	4,657
Want a job now	6,072	6,144	5,882	5,980	5,808	5,823	5,924
Reason not looking: School attendance	1,776	1,899	1,379	1,578	1,427	1,342	1,473
Ill health, disability	859	908	898	903	746	842	948
Home responsibilities	1,250	1,283	1,311	1,203	1,347	1,222	1,351
Think cannot get a job	1,041	971	1,119	1,150	1,127	1,168	1,037
Job-market factors[1]	734	667	761	736	851	756	688
Personal factors[2]	307	304	358	414	277	412	349
Other reasons[3]	1,145	1,083	1,175	1,145	1,160	1,249	1,115
Men							
Total not in labor force	20,162	20,512	20,347	20,460	20,454	20,408	20,699
Do not want a job now	18,010	18,221	18,441	18,382	18,454	18,434	18,660
Want a job now	2,153	2,291	1,948	2,087	2,026	2,005	2,068
Reason not looking: School attendance	865	989	667	824	680	652	767
Ill health, disability	452	464	471	438	359	396	484
Think cannot get a job	389	408	392	425	497	490	409
Other reasons[3]	447	429	418	399	490	467	408
Women							
Total not in labor force	42,439	42,283	42,346	42,204	42,354	42,392	42,213
Do not want a job now	38,520	38,430	38,396	38,482	38,559	38,660	38,365
Want a job now	3,919	3,853	3,933	3,893	3,702	3,818	3,857
Reason not looking: School attendance	911	909	711	754	747	690	707
Ill health, disability	407	444	426	465	387	447	464
Home responsibilities	1,250	1,283	1,311	1,203	1,347	1,222	1,351
Think cannot get a job	652	563	727	725	630	678	628
Other reasons	699	654	757	746	670	782	707
White							
Total not in labor force	53,584	53,523	53,674	53,511	53,564	53,623	53,615
Do not want a job now	49,106	48,983	49,387	49,208	49,367	49,450	49,265
Want a job now	4,478	4,540	4,352	4,298	4,217	4,195	4,398
Reason not looking: School attendance	1,300	1,451	975	1,065	975	933	1,106
Ill health, disability	605	678	618	625	536	611	697
Home responsibilities	931	891	1,032	898	975	907	993
Think cannot get a job	703	666	741	780	817	800	702
Other reasons	939	854	985	931	914	944	901
Black							
Total not in labor force	7,187	7,433	7,238	7,423	7,405	7,341	7,488
Do not want a job now	5,829	6,090	5,937	6,027	6,020	5,945	6,206
Want a job now	1,358	1,342	1,299	1,425	1,423	1,436	1,299
Reason not looking: School attendance	400	372	333	460	381	353	308
Ill health, disability	229	201	220	248	192	229	194
Home responsibilities	285	332	270	263	318	287	319
Think cannot get a job	264	269	296	275	291	342	304
Other reasons	180	168	180	179	241	224	175

---

[1] Job market factors include "could not find job" and "thinks no job available."

[2] Personal factors include "employers think too young or old," "lacks education or training," and "other personal handicap."

[3] Includes small number of men not looking for work because of home responsibilities.

Table B-1. Employees on nonagricultural payrolls by industry

(In thousands)

Industry	Not seasonally adjusted				Seasonally adjusted					
	June 1986	Apr. 1987	May 1987 p	June 1987 p	June 1986	Feb. 1987	Mar. 1987	Apr. 1987	May 1987 p	June 1987 p
Total	100,183	101,381	102,103	102,670	99,323	101,150	101,329	101,598	101,672	101,788
Total private	83,467	84,030	84,758	85,566	82,670	84,215	84,352	84,560	84,658	84,746
Goods-producing	24,951	24,491	24,762	25,094	24,628	24,743	24,749	24,759	24,755	24,769
Mining	772	722	731	735	769	719	722	729	735	737
Oil and gas extraction	460.0	409.0	412.0	415.3	444	406	408	416	420	421
Construction	5,098	4,843	5,040	5,208	4,900	5,038	5,032	5,019	4,995	5,008
General building contractors	1,340.3	1,224.0	1,267.0	1,311.4	1,293	1,309	1,291	1,272	1,266	1,266
Manufacturing	19,081	18,926	18,991	19,151	18,959	18,986	18,995	19,011	19,025	19,024
Production workers	12,956	12,874	12,933	13,078	12,658	12,916	12,925	12,939	12,951	12,982
Durable goods	11,294	11,155	11,187	11,258	11,218	11,179	11,176	11,175	11,179	11,177
Production workers	7,465	7,396	7,429	7,496	7,403	7,398	7,399	7,406	7,415	7,437
Lumber and wood products	725.3	722.5	738.0	754.7	707	733	734	736	739	736
Furniture and fixtures	496.0	504.6	506.5	508.8	497	501	502	504	509	511
Stone, clay, and glass products	600.6	581.3	590.5	597.0	587	588	586	586	586	584
Primary metal industries	754.2	747.9	748.4	751.8	747	733	739	743	742	744
Blast furnaces and basic steel products	283.1	273.5	274.9	276.1	280	261	266	272	272	273
Fabricated metal products	1,438.8	1,418.3	1,419.5	1,431.0	1,432	1,419	1,419	1,423	1,420	1,428
Machinery, except electrical	2,074.7	2,024.4	2,027.3	2,037.9	2,066	2,018	2,015	2,022	2,025	2,030
Electrical and electronic equipment	2,107.7	2,086.0	2,083.5	2,086.2	2,099	2,106	2,099	2,092	2,084	2,078
Transportation equipment	2,021.1	2,013.2	2,014.7	2,026.7	2,013	2,022	2,022	2,011	2,015	2,019
Motor vehicles and equipment	874.7	847.1	846.6	856.5	865	859	854	847	843	843
Instruments and related products	710.1	693.1	691.9	694.6	707	695	694	694	693	691
Miscellaneous manufacturing	365.8	364.0	366.3	369.1	363	364	366	364	366	366
Nondurable goods	7,787	7,771	7,804	7,893	7,741	7,807	7,819	7,836	7,846	7,847
Production workers	5,491	5,478	5,504	5,582	5,455	5,518	5,526	5,533	5,538	5,545
Food and kindred products	1,624.5	1,579.3	1,596.1	1,637.1	1,620	1,630	1,635	1,642	1,635	1,632
Tobacco manufactures	55.9	53.1	53.4	53.8	59	58	57	56	57	57
Textile mill products	707.3	724.3	726.9	732.1	704	722	725	724	727	728
Apparel and other textile products	1,113.8	1,107.4	1,111.3	1,121.5	1,101	1,101	1,103	1,104	1,108	1,109
Paper and allied products	680.9	673.5	675.1	681.2	674	679	678	677	677	674
Printing and publishing	1,456.2	1,494.2	1,495.5	1,501.0	1,455	1,483	1,485	1,493	1,497	1,500
Chemicals and allied products	1,030.3	1,016.4	1,019.8	1,029.7	1,023	1,018	1,017	1,018	1,022	1,022
Petroleum and coal products	172.5	163.4	165.1	167.1	169	164	164	164	164	164
Rubber and miscellaneous plastics products	793.4	811.1	810.7	817.6	787	805	807	809	809	811
Leather and leather products	151.7	148.0	150.1	152.3	149	147	148	149	150	150
Service-producing	75,232	76,890	77,341	77,576	74,695	76,407	76,590	76,839	76,917	77,019
Transportation and public utilities	5,184	5,314	5,352	5,393	5,142	5,315	5,333	5,348	5,347	5,352
Transportation	3,052	3,099	3,132	3,157	3,024	3,097	3,112	3,124	3,123	3,129
Communication and public utilities	2,132	2,215	2,220	2,236	2,118	2,218	2,221	2,224	2,224	2,221
Wholesale trade	5,740	5,748	5,769	5,803	5,712	5,757	5,766	5,772	5,776	5,774
Durable goods	3,374	3,390	3,403	3,423	3,357	3,391	3,397	3,397	3,403	3,406
Nondurable goods	2,366	2,358	2,366	2,380	2,355	2,366	2,369	2,375	2,373	2,368
Retail trade	17,965	17,997	18,207	18,368	17,821	18,140	18,136	18,197	18,207	18,222
General merchandise stores	2,308.8	2,297.2	2,320.1	2,337.5	2,361	2,373	2,380	2,385	2,392	2,390
Food stores	2,878.4	2,920.7	2,934.6	2,959.0	2,875	2,940	2,944	2,953	2,949	2,956
Automotive dealers and service stations	1,958.0	1,970.3	1,983.0	2,004.0	1,937	1,979	1,979	1,978	1,977	1,982
Eating and drinking places	6,064.5	5,956.5	6,091.1	6,178.0	5,870	5,956	5,964	5,962	5,978	5,981
Finance, insurance, and real estate	6,347	6,530	6,575	6,648	6,287	6,501	6,526	6,558	6,576	6,585
Finance	3,169	3,259	3,269	3,303	3,149	3,243	3,256	3,272	3,276	3,280
Insurance	1,946	2,028	2,036	2,045	1,939	2,016	2,022	2,032	2,038	2,039
Real estate	1,232	1,243	1,270	1,300	1,199	1,242	1,248	1,254	1,262	1,266
Services	23,280	23,950	24,093	24,260	23,080	23,759	23,842	23,926	23,997	24,044
Business services	4,789.5	4,998.4	5,062.6	5,115.1	4,770	4,984	5,020	5,046	5,078	5,095
Health services	6,559.5	6,786.4	6,812.2	6,872.6	6,533	6,748	6,773	6,800	6,819	6,845
Government	16,716	17,351	17,345	17,104	16,653	16,935	16,977	17,038	17,014	17,042
Federal	2,918	2,930	2,936	2,947	2,878	2,916	2,922	2,933	2,926	2,906
State	3,773	4,046	3,996	3,839	3,882	3,927	3,930	3,943	3,941	3,950
Local	10,025	10,375	10,413	10,318	9,893	10,092	10,125	10,162	10,149	10,186

p = preliminary

Table B-2. Average weekly hours of production or nonsupervisory workers[1] on private nonagricultural payrolls by industry

Industry	Not seasonally adjusted				Seasonally adjusted					
	June 1986	Apr. 1987	May 1987 p	June 1987 p	June 1986	Feb. 1987	Mar. 1987	Apr. 1987	May 1987 p	June 1987 p
Total private	34.9	34.6	34.8	35.0	34.7	34.9	34.8	34.7	34.9	34.8
Mining	41.9	41.8	42.4	41.9	(2)	(2)	(2)	(2)	(2)	(2)
Construction	37.8	37.4	38.6	38.2	(2)	(2)	(2)	(2)	(2)	(2)
Manufacturing	40.8	40.4	40.9	41.1	40.6	41.1	40.9	40.6	41.0	41.0
Overtime hours	3.4	3.3	3.6	3.7	3.4	3.6	3.6	3.5	3.8	3.7
Durable goods	41.4	41.1	41.5	41.7	41.3	41.7	41.5	41.2	41.6	41.5
Overtime hours	3.5	3.4	3.7	3.8	3.5	3.7	3.7	3.4	3.9	3.8
Lumber and wood products	40.8	40.6	41.4	41.5	40.1	41.3	40.9	40.6	41.1	40.8
Furniture and fixtures	39.8	38.8	39.4	39.7	39.7	40.2	40.0	39.1	39.8	39.7
Stone, clay, and glass products	42.6	42.1	42.7	42.7	42.1	42.8	42.5	41.9	42.2	42.2
Primary metal industries	41.8	42.5	42.9	43.3	41.7	42.6	42.6	42.3	43.0	43.2
Blast furnaces and basic steel products	41.7	42.9	43.4	44.0	41.4	42.3	42.3	42.4	43.3	43.7
Fabricated metal products	41.3	40.9	41.4	41.6	41.1	41.6	41.5	41.2	41.6	41.4
Machinery, except electrical	41.7	41.6	42.0	42.2	41.7	42.2	42.0	41.8	42.2	42.1
Electrical and electronic equipment	40.9	40.3	40.6	40.9	40.9	41.1	40.9	40.6	40.8	40.9
Transportation equipment	42.3	41.9	42.2	42.0	42.3	42.5	42.3	41.9	42.2	42.0
Motor vehicles and equipment	42.6	42.3	42.6	42.5	42.4	43.0	42.9	42.1	42.5	42.4
Instruments and related products	40.9	40.8	41.2	41.5	40.9	41.3	41.3	41.0	41.5	41.5
Miscellaneous manufacturing	39.6	38.8	39.1	39.2	(2)	(2)	(2)	(2)	(2)	(2)
Nondurable goods	39.9	39.5	40.1	40.3	39.8	40.3	40.1	39.7	40.2	40.3
Overtime hours	3.2	3.1	3.5	3.6	3.2	3.5	3.5	3.3	3.7	3.6
Food and kindred products	40.0	39.3	40.1	40.2	39.9	40.1	40.0	39.8	40.1	40.2
Tobacco manufactures	38.1	37.6	39.3	39.7	(2)	(2)	(2)	(2)	(2)	(2)
Textile mill products	41.1	40.9	41.9	42.4	40.8	42.0	42.1	41.4	42.0	42.1
Apparel and other textile products	36.9	35.8	37.0	37.3	36.6	37.4	37.0	36.1	37.0	37.0
Paper and allied products	43.1	42.8	43.3	43.4	43.1	43.3	43.0	43.0	43.5	43.4
Printing and publishing	37.6	37.6	37.7	37.8	38.0	38.1	37.9	37.7	37.9	38.2
Chemicals and allied products	41.9	42.2	42.1	42.1	41.8	42.2	42.0	42.2	42.1	42.0
Petroleum and coal products	44.2	43.8	43.9	43.4	44.1	44.0	44.1	43.9	44.3	43.4
Rubber and miscellaneous plastics products	41.2	40.9	41.5	41.9	(2)	(2)	(2)	(2)	(2)	(2)
Leather and leather products	37.6	36.7	38.7	39.6	(2)	(2)	(2)	(2)	(2)	(2)
Transportation and public utilities	39.4	38.8	38.9	39.3	39.1	39.2	39.0	39.0	39.1	39.0
Wholesale trade	38.5	38.1	38.3	38.4	38.4	38.3	38.1	38.2	38.3	38.2
Retail trade	29.5	29.2	29.3	29.7	29.1	29.3	29.3	29.5	29.4	29.3
Finance, insurance, and real estate	36.5	36.3	36.3	36.5	(2)	(2)	(2)	(2)	(2)	(2)
Services	32.6	32.3	32.4	32.6	32.5	32.6	32.5	32.4	32.5	32.5

---

[1] Data relate to production workers in mining and manufacturing; to construction workers in construction; and to nonsupervisory workers in transportation and public utilities; wholesale and retail trade; finance, insurance, and real estate; and services. These groups account for approximately four-fifths of the total employees on private nonagricultural payrolls.

[2] This series is not published seasonally adjusted since the seasonal component is small relative to the trend-cycle and/or irregular components and consequently cannot be separated with sufficient precision.

p = preliminary.

Table B-3. Average hourly and weekly earnings of production or nonsupervisory workers¹ on private nonagricultural payrolls by industry

Industry	Average hourly earnings				Average weekly earnings			
	June 1986	Apr. 1987	May 1987 p	June 1987 p	June 1986	Apr. 1987	May 1987 p	June 1987 p
Total private	$8.72	$8.91	$8.93	$8.93	$304.33	$308.29	$310.76	$312.55
Seasonally adjusted	8.75	8.91	8.94	8.96	303.63	309.18	312.01	311.81
Mining	12.49	12.43	12.42	12.48	523.33	519.57	526.6[illegible]	522.91
Construction	12.3[illegible]	12.55	12.61	12.61	466.45	469.37	484.75	481.70
Manufacturing	9.71	9.87	9.86	9.88	396.17	398.75	403.27	406.07
Durable goods	10.26	10.39	10.39	10.42	424.76	427.03	431.19	434.51
Lumber and wood products	8.40	8.34	8.36	8.45	342.72	338.60	346.10	350.68
Furniture and fixtures	7.47	7.58	7.63	7.61	297.31	294.10	300.62	302.12
Stone, clay, and glass products	10.04	10.23	10.24	10.22	427.70	430.68	437.25	436.39
Primary metal industries	11.89	11.96	11.93	11.93	497.00	508.30	511.80	516.57
Blast furnaces and basic steel products	13.86	13.84	13.73	13.72	577.96	593.74	595.88	603.68
Fabricated metal products	9.90	9.98	9.97	10.03	408.87	408.18	412.76	417.25
Machinery, except electrical	10.58	10.70	10.69	10.76	441.19	445.12	448.98	454.07
Electrical and electronic equipment	9.59	9.82	9.83	9.82	392.23	395.75	399.10	401.64
Transportation equipment	12.72	12.80	12.83	12.94	538.06	536.32	541.43	543.48
Motor vehicles and equipment	13.33	13.40	13.41	13.52	567.86	566.82	571.27	574.60
Instruments and related products	9.40	9.67	9.68	9.68	384.46	394.54	398.82	401.72
Miscellaneous manufacturing	7.53	7.67	7.73	7.73	298.19	297.60	302.24	303.02
Nondurable goods	8.92	9.14	9.12	9.12	355.91	361.03	365.71	367.54
Food and kindred products	8.74	8.95	8.96	8.93	349.60	351.74	359.30	358.99
Tobacco manufactures	13.79	14.28	14.51	15.46	525.40	536.93	570.24	613.76
Textile mill products	6.86	7.12	7.13	7.15	281.95	291.21	298.75	303.16
Apparel and other textile products	5.83	5.94	5.89	5.95	215.13	212.65	217.93	221.94
Paper and allied products	11.17	11.37	11.39	11.41	481.43	486.64	493.19	495.19
Printing and publishing	9.91	10.14	10.19	10.16	372.62	381.26	384.16	384.05
Chemicals and allied products	11.95	12.30	12.30	12.24	500.71	519.06	517.83	515.30
Petroleum and coal products	14.12	14.50	14.50	14.29	624.10	635.10	636.55	620.19
Rubber and miscellaneous plastics products	8.71	8.82	8.84	8.85	358.85	360.74	366.86	370.82
Leather and leather products	5.91	6.12	6.04	6.07	222.22	224.60	233.75	240.37
Transportation and public utilities	11.63	11.94	11.92	12.01	458.22	463.27	463.69	471.99
Wholesale trade	9.33	9.53	9.57	9.56	359.21	363.09	366.53	367.10
Retail trade	6.00	6.09	6.09	6.07	177.00	177.83	178.44	180.28
Finance, insurance, and real estate	8.37	8.71	8.71	8.68	305.51	316.17	316.17	316.82
Services	8.10	8.40	8.38	8.37	264.06	271.32	271.51	272.86

¹ See footnote 1, table B-2.

p = preliminary.

Table B-4. Hourly Earnings Index for production or nonsupervisory workers¹ on private nonagricultural payrolls by industry

(1977 = 100)

Industry	Not seasonally adjusted					Seasonally adjusted						
	June 1986	Apr. 1987	May 1987p	June 1987p	Percent change from: June 1986-June 1987	June 1986	Feb. 1987	Mar. 1987	Apr. 1987	May 1987p	June 1987p	Percent change from: May 1987-June 1987
Total private nonfarm:												
Current dollars	168.9	172.7	172.6	172.8	2.3	169.2	171.8	172.2	172.6	172.7	173.1	0.2
Constant (1977) dollars	94.9	94.3	94.0	N.A.	(2)	95.2	94.6	94.4	94.2	94.0	N.A.	(3)
Mining	181.6	181.3	181.7	182.8	.7	(4)	(4)	(4)	(4)	(4)	(4)	(4)
Construction	151.0	153.0	154.0	154.0	2.0	151.9	152.4	153.8	153.7	154.2	154.9	.4
Manufacturing	172.2	175.3	174.4	174.7	1.5	172.2	173.7	174.3	175.0	174.3	174.7	.2
Transportation and public utilities	170.2	174.8	174.9	175.8	3.3	171.3	174.3	174.6	175.2	175.9	176.7	.4
Wholesale trade	172.2	175.9	176.7	176.4	2.4	(4)	(4)	(4)	(4)	(4)	(4)	(4)
Retail trade	158.0	160.2	160.4	160.1	1.4	158.0	158.9	159.0	159.8	160.1	160.1	(5)
Finance, insurance, and real estate	180.1	186.7	186.9	186.7	3.6	(4)	(4)	(4)	(4)	(4)	(4)	(4)
Services	173.4	179.4	179.3	179.4	3.5	174.1	178.4	179.0	179.4	179.6	180.2	.3

1 See footnote 1, table B-2.
2 Percent change is -1.4 percent from May 1986 to May 1987, the latest month available.
3 Percent change is -0.3 percent from April 1987 to May 1987, the latest month available.
4 These series are not seasonally adjusted since the seasonal component is small relative to the trend-cycle and/or irregular components and consequently cannot be separated with sufficient precision.
5 Percent change is less than .05 percent
N.A. Data not available.
p = preliminary.

Table B-5. Indexes of aggregate weekly hours of production or nonsupervisory workers[1] on private nonagricultural payrolls by industry

(1977 = 100)

Industry	Not seasonally adjusted				Seasonally adjusted					
	June 1986	Apr. 1987	May 1987 p	June 1987 p	June 1986	Feb. 1987	Mar. 1987	Apr. 1987	May 1987 p	June 1987 p
Total	118.8	118.1	120.1	122.2	116.8	119.7	119.6	119.6	120.2	120.1
Goods-producing	99.3	96.3	99.3	101.1	97.2	99.3	98.9	98.0	99.2	99.0
Mining	83.7	79.6	82.2	81.8	83.4	79.9	80.0	81.3	83.4	81.4
Construction	138.0	127.0	137.4	141.1	129.5	136.2	135.5	132.8	134.5	132.9
Manufacturing	92.6	91.2	92.8	94.2	91.6	93.1	92.8	92.1	93.3	93.3
Durable goods	90.7	89.2	90.5	91.7	89.7	90.6	90.2	89.6	90.5	90.6
Lumber and wood products	101.7	99.7	104.1	107.0	97.2	103.3	102.5	102.0	103.6	102.4
Furniture and fixtures	105.7	105.3	107.1	108.5	105.7	107.9	107.9	105.7	108.9	109.7
Stone, clay, and glass products	90.0	86.0	89.1	89.9	86.5	88.3	87.5	86.3	86.9	86.7
Primary metal industries	62.5	62.8	63.4	64.3	61.6	61.2	61.9	62.1	62.9	63.6
Blast furnaces and basic steel products	51.9	50.6	51.2	52.2	50.8	46.8	47.7	49.6	50.7	51.1
Fabricated metal products	89.5	87.4	88.6	90.2	88.5	89.1	88.9	88.4	89.0	89.1
Machinery, except electrical	87.3	84.7	85.8	87.0	87.0	85.1	84.7	84.8	86.1	86.6
Electrical and electronic equipment	99.1	98.0	98.9	100.0	98.8	100.8	99.9	99.0	99.6	99.7
Transportation equipment	97.7	97.0	97.8	98.0	97.2	98.9	98.2	96.6	97.3	97.5
Motor vehicles and equipment	88.8	86.2	87.0	87.8	87.1	89.0	88.0	85.6	86.1	86.6
Instruments and related products	103.3	100.7	101.3	102.9	102.4	102.0	101.7	101.0	102.0	102.2
Miscellaneous manufacturing	80.9	79.4	80.4	81.5	80.2	81.1	81.1	79.9	80.8	80.6
Nondurable goods	95.4	94.2	96.2	98.0	94.5	96.7	96.5	95.7	97.0	97.2
Food and kindred products	98.2	93.2	96.4	99.8	97.8	99.3	99.4	99.3	99.8	99.6
Tobacco manufactures	72.6	69.2	72.2	72.9	77.6	76.0	77.7	77.3	80.1	77.3
Textile mill products	78.6	80.4	82.7	84.3	77.6	82.3	82.9	81.3	82.9	83.2
Apparel and other textile products	86.2	83.1	85.9	87.6	84.6	86.1	85.3	83.5	85.4	85.9
Paper and allied products	100.3	98.6	99.9	101.6	99.1	100.6	99.7	99.5	100.6	100.2
Printing and publishing	126.3	129.2	129.5	130.1	127.5	130.2	129.4	128.7	129.8	131.5
Chemicals and allied products	93.7	93.3	93.6	94.4	92.3	93.4	93.1	93.4	93.7	93.3
Petroleum and coal products	85.6	82.8	84.4	85.6	83.3	83.1	83.3	82.9	84.5	83.5
Rubber and miscellaneous plastics products	111.1	112.6	114.2	116.3	109.8	113.5	113.5	112.6	114.6	115.5
Leather and leather products	58.2	56.3	60.3	62.6	56.1	57.8	57.8	57.4	59.7	60.0
Service-producing	129.6	130.2	131.6	133.8	127.6	131.0	131.0	131.5	131.8	131.6
Transportation and public utilities	105.1	106.6	107.9	110.0	103.5	107.8	107.7	107.9	108.2	108.2
Wholesale trade	117.7	116.2	117.4	118.5	116.9	117.4	116.9	117.4	117.6	117.3
Retail trade	120.2	118.9	120.7	123.5	117.6	120.4	120.3	121.6	121.2	120.8
Finance, insurance, and real estate	138.7	141.1	142.2	144.8	137.1	141.0	141.5	142.0	142.5	143.0
Services	147.7	150.0	151.3	153.4	145.8	150.1	150.2	150.3	151.0	151.6

[1] See footnote 1, table B-2

p = preliminary

Table B-6. Indexes of diffusion: Percent of industries in which employment[1] increased

Time span	Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Over 1-month span	1985	55.9	47.0	52.4	47.3	53.2	46.8	53.8	53.8	47.8	53.2	54.3	57.3
	1986	53.2	48.1	48.1	53.5	52.4	46.8	52.4	56.2	55.1	53.2	59.7	59.7
	1987	55.5	56.8	58.6	58.4	p57.8	p53.0						
Over 3-month span	1985	51.1	48.6	42.4	46.5	44.3	49.7	47.0	48.6	45.9	47.8	55.1	56.5
	1986	49.7	44.9	45.7	48.4	47.6	45.4	48.4	55.1	55.9	58.1	58.6	60.3
	1987	58.6	59.5	61.1	p64.1	p59.7							
Over 6-month span	1985	46.5	48.5	43.2	44.3	44.3	45.1	43.0	44.3	49.2	49.2	47.3	45.9
	1986	47.6	47.6	43.0	43.2	45.4	48.4	47.3	53.0	55.2	58.9	57.8	58.9
	1987	61.9	p63.8	p59.2									
Over 12-month span	1985	44.6	44.1	43.8	40.8	41.6	41.6	42.2	42.4	43.8	44.3	44.1	42.4
	1986	c43.2	44.1	46.7	45.7	47.8	49.5	49.5	51.6	54.9	52.2	p55.7	p57.8
	1987												

[1] Number of employees, seasonally adjusted for 1, 3, and 6 month spans, on payrolls of 185 private nonagricultural industries. Data for the 12-month span are unadjusted.

p = preliminary
c = corrected

NOTE: Figures are the percent of industries with employment rising. (Half of the unchanged components are counted as rising.) Data are centered within the spans.

Senator **Sarbanes**. Let me pursue the last part of your statement first, on productivity comparisons.

In looking at those figures, and given the fact on a comparative basis we are doing better internationally on the productivity front, to what extent do we have to try to factor in where the respective economies are in terms of the economic cycle?

Mrs. **Norwood**. I think that's terribly important. If we are to regain not only our competitiveness but equally importantly if we are to reduce the deficit in international trade, it's going to have to be because of purchases by other countries. That means that their economies are going to have to keep moving upward.

There's been a great deal of discussion about how to achieve that. On the cost side, I think these data suggest that because of improved productivity in the United States in manufacturing and shifts in the exchange rates, we are doing much better.

Senator **Sarbanes**. Is the poor productivity performance in these other countries due in part becaue of what's happening to them in terms of cyclical movement of their economy?

Mrs. **Norwood**. There may be some of that. I think it is partly due to differences in our labor markets. The data we released today show that there has been a continuation of increasing efficiency within manufacturing. We are continuing to produce output and we are not adding labor force.

Senator **Sarbanes**. Let me ask about that because I have read some reports that there's been a movement—I don't know how extensive—by manufacturing firms to lease labor from outside firms rather than to hire the labor directly. I gather if that happens, employment is not listed as manufacturing but is listed instead under business services. Is that correct?

Mrs. **Norwood**. That's correct.

Senator **Sarbanes**. In which case, of course, that would understate the number of people working in manufacturing and I assume would overstate productivity.

Mrs. **Norwood**. Yes, that could happen.

Senator **Sarbanes**. Because when you calculate the productivity, you don't encompass within it the business services category, do you?

Mrs. **Norwood**. Well, what you would encompass is the cost of those services. If the manufacturing establishments are paying the costs of those workers, that goes into the overall calculations.

Senator **Sarbanes**. Okay. So it would affect the employment.

Mrs. **Norwood**. Mr. Mark tells me that output is measured on a value added basis and so it's adjusted for that.

We are not sure, Mr. Chairman, exactly how much contracting out is occurring. There's always been a good deal of contracting out. We did a very quick small survey recently to try to see whether there was very much of a change, particularly in some industries which had a decline in employment, some of the manufacturing industries. And we found that many of them were contracting out and that some had increased their contracting out.

The data were not as conclusive as, I must say, I had anticipated they would be. We are planning a survey of the temporary help industry as one of our occupational wage programs this coming year and I anticipate that we will learn a lot more once we have those data available.

Senator **Sarbanes**. In your statement you say that the labor force for the 16- to 24-year group has risen considerably less than last year, and you say it's risen this year 2.6 million. How much was it last year?

Mrs. **Norwood**. About 3.5 million.

Senator **Sarbanes**. And do you have an explanation for the difference?

Mrs. **Norwood**. There may be several explanations. One that we have to look at—and I'm not sure how important it is—is that the survey week came somewhat earlier than is usual. The 12th of the month fell on a Friday. The result is that we may have missed some of the people who would be coming into the labor force in the following week.

About two-thirds of the drop in the unemployment rate in the month of June came from the teenage component.

Senator **Sarbanes**. So two-thirds of it is attributable to the factor we're talking about now, that is essentially the size of that labor force?

Mrs. **Norwood**. Yes.

Senator **Sarbanes**. The improvement in the unemployment rate is due not to more jobs but fewer people in the job market, is that correct, for this month?

Mrs. **Norwood**. Yes. That's what the arithmetic shows quite clearly. The change in employment is not statistically significant in either of the surveys. There has been quite a lot of growth over the last 6 months, but there has clearly it seems to me been something of a slowdown in the last 2 months.

Senator **Sarbanes**. The jobless rate for adult women is less than the jobless rate for adult men?

Mrs. **Norwood**. Yes.

Senator **Sarbanes**. That's a historical reversal, is it not?

Mrs. **Norwood**. Yes, it is. What has happened in the past is that the unemployment rate for women has generally been higher than the unemployment rate for men in good times as well as bad. During a recessionary period, as more men are laid off, the gap between the two has narrowed.

During the most recent recession, that situation reversed and has really stayed reversed because of the changes that are going on in manufacturing where only about 40 percent of the employment lost during the recession that has been recovered and because manufacturing has a very high proportion of males in its work force.

Senator **Sarbanes**. In other words, as we have moved out of the recession, 60 percent of the jobs in manufacturing have not been recovered, is that correct?

Mrs. **Norwood**. That's correct.

Senator **Sarbanes**. And, of course, that then impacts disproportionately on males. What percentage of manufacturing jobs are held by males, do you know?

Mrs. **Norwood**. Roughly two-thirds of all manufacturing jobs are held by men.

Senator **Sarbanes**. Is there any other factor or factors explaining this reversal of the historical trend in terms of unemployment among males and unemployment among women?

Mrs. **Norwood**. Yes, I think so. One important factor is the change in the educational attainment of women in this country. Many women now go on to college and have the education that our projections show is going to be needed in terms of the kinds of jobs that we are creating.

So I think we have a better educated female work force than we did 20 years ago.

Senator **Sarbanes**. Well, thank you very much.

Congressman McMillan.

Representative **McMillan**. Thank you, Mr. Chairman.

I would also like to add my congratulations to you, Mrs. Norwood, on your reappointment as Commissioner. I am new on the committee, but I have been impressed with your objectivity and I want to thank you for that and wish you well.

Mrs. **Norwood**. Thank you very much.

Representative **McMillan**. Now I also have, Mr. Chairman, an opening statement that I would like to submit for the record.

Senator **Sarbanes**. The opening statement will be included in full in the record.

[The written opening statement of Representative McMillan follows:]

WRITTEN OPENING STATEMENT OF REPRESENTATIVE McMILLAN

IT GIVES ME GREAT PLEASURE TO WELCOME COMMISSIONER NORWOOD HERE THIS MORNING. I'D LIKE TO TAKE THIS OPPORTUNITY TO CONGRATULATE DR. NORWOOD FOR SENATE CONFIRMATION OF HER NOMINATION FOR ANOTHER TERM AS BLS COMMISSIONER. AMONG MEMBERS OF BOTH HOUSES OF CONGRESS DR. NORWOOD AND BLS ENJOY A STERLING REPUTATION FOR HIGH STANDARDS AND NONPARTISAN OPERATION. WE LOOK FORWARD TO WORKING WITH YOU AND THE BUREAU IN THE FUTURE.

ONCE AGAIN COMMISSIONER NORWOOD BRINGS VERY GOOD NEWS. THE CIVILIAN UNEMPLOYMENT RATE DECLINED TWO TENTHS OF A POINT IN JUNE TO A LEVEL OF 6.1 PERCENT. THIS IS THE LOWEST UNEMPLOYMENT RATE SINCE THE END OF 1979.

THE EMPLOYMENT-POPULATION RATIO, AN IMPORTANT MEASURE OF OUR ECONOMY'S ABILITY TO CREATE ENOUGH JOBS, ALSO SIGNALS ECONOMIC STRENGTH. THOUGH DOWN SLIGHTLY FROM THE RECORD HIGH OF LAST MONTH, THE 61.4 PERCENT JUNE E-P RATIO IS EXTREMELY HIGH BY HISTORICAL STANDARDS. ASIDE FROM LAST MONTH, ITS LEVEL IS THE HIGHEST EVER RECORDED.

THE ECONOMIC PROGRESS MADE DURING THIS EXPANSION IS IMPRESSIVE. DURING THE 55 MONTHS OF THIS UPSWING OVER 13 MILLION JOBS HAVE BEEN CREATED, EVEN AS THE INFLATION RATE DECLINED FROM THE DOUBLE DIGIT LEVELS OF THE LATE 1970'S. THOUGH PROBLEMS REMAIN, THE EVIDENCE CERTAINLY DOES NOT SUPPORT THOSE WHO CONSTANTLY VOICE PESSIMISM ABOUT THE DIRECTION OF THE ECONOMY. RECENT EMPLOYMENT DATA SHOW THAT THE ECONOMY CONTINUES TO IMRPOVE, AND THE RECENT INCREASES IN THE LEADING INDICATORS MEAN THIS EXPANSION WILL PROBABLY CONTINUE FOR THE FORESEEABLE FUTURE.

ANOTHER ENCOURAGING DEVELOPMENT IS THE GREAT IMPROVEMENT IN U.S. INTERNATIONAL COMPETITIVENESS IN 1986. ACCORDING TO BLS, U.S. MANUFACTURING PRODUCTIVITY INCREASED 3.5 PERCENT BETWEEN 1985 AND 1986, EXCEEDING PRODUCTIVITY GROWTH IN MOST OTHER ADVANCED INDUSTRIAL NATIONS. MOREOVER, UNIT LABOR COSTS IN MANUFACTURING ACTUALLY DECLINED IN THE U.S., WHILE INCREASING IN MOST OF EUROPE AND JAPAN. THESE POSITIVE TRENDS SHOULD LEAD TO IMPROVED U.S. EXPORT PERFORMANCE AND FURTHER DECLINE IN THE TRADE DEFICIT.

Representative **McMillan**. I think some of the underlying trends that we've been talking about are interesting. Your comments with respect to educational levels of women versus men that might be entering the work force is somewhat confirmed by a few figures that I have in my head. For example, I think the entering class at the University of North Carolina at Chapel Hill last year was approximately 63 percent women, and I think that's occurred in some other universities with which I'm familiar.

That might in itself be an interesting study because we are not just talking about what exists today but what may exist in the future and the employment ratio that you referred to earlier of women versus men, in a period in which the economy is undergoing shifts to higher technology in which a different set of educational skills and abilities may be applicable, you suggest that that in fact may favor women in the work force as opposed to men?

Mrs. **Norwood**. I think the point I was making was that the difference in the 1980's from that in the 1950's, for example, and the 1960's, when we had a much higher unemployment rate for women compared to men, may be in part attributable to the fact that during that period many, many more women have gone on to get better educations. And it's quite clear that both men and women in the future are going to need the kind of educational background that is required for jobs that require special technology and special kinds of skills.

That has nothing to say, I might add, with the quality of education that we are providing. That's another question and a very important one I believe.

Representative **McMillan**. So the short-term figures that we are looking at in this period really are a continuation of a trend that has existed for some period of time?

Mrs. **Norwood**. Yes.

Representative **McMillan**. Could you trace back historically when that began to reflect itself statistically and add any comments to that that you perceive for the future?

Mrs. **Norwood**. We could provide a statement for the record on that. We'll go back and look at women and men and their educational attainment. We do have data of that kind in the labor force over the last several decades. We'd be glad to do that and send you that information.

[The following information was subsequently supplied for the record:]

U. S. Department of Labor

Commissioner for
Bureau of Labor Statistics
Washington, D.C. 20212

JUL 10 1987

Honorable J. Alex McMillan
House of Representatives
Washington, D.C. 20515

Dear Congressman McMillan:

I am responding to two questions you raised during my July 3 testimony before the Joint Economic Committee. They related to the educational attainment of women in the labor force and to the youth share of discouraged workers.

As the tabulation below shows, the educational level of women in the labor force has, indeed, improved considerably (even more than for men) since the end of the 1970 decade. All other things being equal, that trend should have had some downward effect on the unemployment rate for women.

Percent distribution of the labor force by educational attainment for men and women age 25-64, 1979 and 1986

Educational attainment	Men		Women	
	1979	1986	1979	1986
Total	100.0	100.0	100.0	100.0
Less than 4 years of high school	23.2	17.2	20.1	13.2
High school, 4 years	35.7	37.0	45.2	44.3
1-3 years of college	17.4	18.9	17.1	20.3
4 or more years of college	23.7	26.9	17.1	22.2

The following tabulation provides the age distribution of discouraged workers (the 1986 annual average was chosen rather than the slightly more current, but not seasonally adjusted, quarterly data).

JUL 10 1987

Percent distribution of discouraged workers by age and sex, 1986 annual averages

Age	Total	Men	Women
Total....................	100.0	38.9	61.1
16 to 19 years.........	10.7	6.1	4.6
20 to 24 years.........	14.3	5.8	8.4
25 to 54 years.........	52.6	17.1	35.6
55 years and over......	22.5	10.0	12.6

As shown, youths 16 to 24--who make up about 19 percent of the noninstitutional population 16 years of age and over--accounted for 25 percent of the discouraged workers in 1986.

I hope this information will have answered your questions. Please let me know if we can be of further assistance.

Sincerely yours,

Janet L Norwood

JANET L. NORWOOD
Commissioner

Representative McMILLAN. Well, I think that would be important in informing the Congress about some of its responsibilities.

Also, I would be interested in any further comments you may have with respect to trends in teenage unemployment or employment and the size of the work force and particularly as it may impact minorities because that's been I think a concern of all of us. Could you put the figures for June—and I realize we may have some statistical problem with respect to comparative timeframe, but put it in a little bit of historical perspective in terms of what this may say or not say about the longer term trends?

Mrs. NORWOOD. In June, there was a drop in the unemployment rate for black Americans. The labor force situation for blacks has been changing. The unemployment rate for black teenagers was 33.3 percent, still extraordinarily high, but it is well below the 40 to 50 percent rate that we have had earlier in the 1980's.

Representative McMILLAN. Excuse me. Would you say that's seasonal or do you see in that some reversal of what we have generally considered to be adverse trend?

Mrs. NORWOOD. Over the last several years there has been a declining unemployment rate for black teenagers. However, I'm not certain how much of the June decline—from 39 percent to 33.3 percent—will remain with us after another couple of months. We need to have a little bit more time to see that.

In general, however, the black population as a whole, including black teenagers, have done a little bit better during the recovery than they had previously. But I think it should be understood that during the 1980 and the 1981-82 recessions their labor force status deteriorated quite a bit.

There are fewer teenagers generally in the population. The birth rate of the black population declined less than the birth rate of the white population.

Representative McMILLAN. When you say fewer, are you speaking in relative terms or absolute terms?

Mrs. NORWOOD. Well, for teenagers as a whole, we have seen some reduction absolutely in the work force of teenagers. Their labor force declined by about 200,000 over the last year.

I think what we are anticipating is that as we move through the rest of this century we will be seeing a work force that is going to be growing older merely because there will be fewer teenagers entering that work force. We anticipate that it will be about 1992 or so before that situation turns around. That should mean less upward pressure on the unemployment rate since teenagers always have much higher unemployment rates than others.

On the other hand, a much larger proportion of the entire work force and of the teenage work force in the future will be made up of minorities than in the past, and that could be a very serious problem for us unless we are able to move those people into more rewarding jobs.

Representative McMILLAN. One other question. You talked a little bit today about the statistics that represent discouraged workers. What are the criteria by which a person falls into that classification?

Mrs. NORWOOD. A discouraged worker is one who wants a job but does not meet the definition for unemployment. To be classified as unemployed requires that a person must not have worked during the survey week, be available for work, and have searched for work during the preceding 4 weeks. A discouraged worker meets the first two criteria, but does not meet the last, and says that he has not searched for work because essentially he or she believes that it would be of no value.

We do not include discouraged workers in the official unemployment rate because they have not made any recent attempt to look for a job. Discouragement is really a state of mind and our labor force definitions refer to specific activities that can be measured.

I did refer in my statement to one of the array of unemployment rates U-7 that we publish which does include discouraged workers. The data were quite encouraging in that we have seen a continued decline in the number of discouraged workers, but a million is still a lot of people.

Representative **McMillan**. Do we develop that statistic and apply it to teenage workers?

Mrs. **Norwood**. Yes. All people 16 years and over are included in those data. Discouraged workers are disproportionately women and minorities.

Representative **McMillan**. Well, Congress is going to be considering legislation with respect to the minimum wage, and one of the issues I think has to do with entry level jobs and that tends to focus on the teenager. And that discouragement index it seems to me becomes more sensitive under these circumstances. And I would hope that maybe we could get a little additional information on that to perhaps inform the Congress in its judgment it's going to try to make on that issue in the coming weeks.

Mrs. **Norwood**. Yes, certainly we can do that. We have already provided a great deal of information to congressional staffs on both sides of the aisle on the demographic characteristics of people involved in minimum wage and low wage jobs. We would be glad to do whatever else we can.

Representative **McMillan**. Thank you, Mrs. Norwood.

Thank you, Mr. Chairman.

Senator **Sarbanes**. Commissioner, is the survey week the same week every month?

Mrs. **Norwood**. It's the calendar week containing the 12th of the month. So, depending on where the 12th falls, the week may be earlier or later in the month.

Senator **Sarbanes**. Senator Melcher.

Senator **Melcher**. Mrs. Norwood, you wouldn't mind answering a couple questions on a different subject, would you?

Mrs. **Norwood**. Not at all.

Senator **Melcher**. You testified before the Aging Committee a few days ago that if you were asked or required by Congress to prepare a different consumer price index for older Americans that it would cause you some problems and would take some time.

Were those problems other than time connected with what were older Americans, a definition of older Americans?

Mrs. **Norwood**. I believe, Senator, that I did emphasize to you the need for us, if we are to create a new statistical measure, to be able very specifically to define the group whose experience we want to reflect. And I pointed out to you I think basically two things.

First, who are the older people? That is always difficult to define depending on your own age I suppose. But if we take those 65 to 74, their expenditure experience is similar to that of the general population. The biggest expenditure changes occur after age 75. Another definitional point that we discussed, as I recall, was whether such an index should be confined to the retired.

The other point that I made was that in order to produce a truly accurate CPI for older Americans, however defined, we would need to do a great deal that we have not now done and expand some of our samples and that that would take some time and some money, but that there were some shortrun kinds of things that could be done and if coupled with some expansion of survey work and analysis I think they could be quite useful.

Senator MELCHER. Did you tell the same thing to the conferees that were meeting on the appropriations bill that had that requirement in it?

Mrs. NORWOOD. I have had no contact with the conferees on the appropriations bill, Senator.

Senator MELCHER. What has the liaison for the Department of Labor told the conferees?

Mrs. NORWOOD. I do not know. I would guess that they probably have told the conferees——

Senator MELCHER. The same thing you just said?

Mrs. NORWOOD. No. That it is the administration's position not to add things that might cost money, that that could be a problem.

Senator MELCHER. Precisely.

Mrs. NORWOOD. That's not necessarily my position.

Senator MELCHER. Then what the conferees may have been told is that if you develop such an index it might lead Congress to say, well, we ought to look at the cost-of-living adjustment to see whether or not the cost-of-living adjustment truly reflects what the difference is in inflation one year to another for retirees who are affected by it, such as on Social Security, railroad retirement, military retirees, and Federal employee retirees? So you surmise that is probably what the administration's position is and what the liaison people from the Bureau of Labor Statistics and the Department of Labor have told the conferees?

Mrs. NORWOOD. No, sir. The position of the Bureau of Labor Statistics is that we do not know and have no way of knowing whether, if an accurate CPI for older citizens, however defined, were produced, it would show higher or lower price changes. It would be an accurate reflection of the experience of that group, but we have no idea whether it would be higher or lower. That has been very clearly our position.

And I do want to reiterate again that I and my staff have had no contact with the appropriations people. The Congressional Affairs Office of the Department of Labor may have, but they represent the administration's position clearly.

Senator MELCHER. Then they would not be liaison people from the Department of Labor?

Mrs. NORWOOD. They talk to us, but we have taken no position on this. We don't take policy positions.

Senator MELCHER. Well, I mention that because it's due to the statements made by liaison from the Bureau of Labor Statistics, the report back to me is that they didn't want it and it was dropped.

Mrs. NORWOOD. Senator, I think there are a few things that seem to get confused in the discussion generally—the broader discussion.

One is, do you need, should you have, what would it cost to produce a CPI for older Americans? That's one issue.

The second issue is, if you had such an index, would Social Security escalation cost the Government more money or less money?

We have no answer to the second question. Obviously, we know what it takes to produce an index and we have some general idea of answers to the first set of questions.

Senator MELCHER. Well, first of all, it would cost money out of the trust fund, whether we want to say that costs the Federal Government money, when we count trust funds as part of the Federal Government's money, I think that's true. But the cost out of the trust fund is the benefit directly, dollar for dollar, to retirees.

I interpreted your answer previously, when you said you suspected that what the conferees may have been told by liaison was that it would cost more money and therefore the administration was opposed to it——

Mrs. NORWOOD. To produce an index.

Senator MELCHER. Pardon me.

Mrs. NORWOOD. To produce an index, not necessarily——

Senator MELCHER. To produce an index?

Mrs. NORWOOD. Yes, and that is our position and I was quite clear on that when I testified before the Special Committee on Aging. I have no idea whether such an index would create larger or lower escalation of benefits for Social Security recipients. That's a question we cannot answer. We don't have such an index and we can't answer it.

Senator MELCHER. I think everything that the Department of Labor does does cost money.

Mrs. NORWOOD. That's true.

Senator MELCHER. I think the annual appropriation proves that fact beyond a doubt. I think what we're talking about here is pennies compared to millions and the issue is whether the millions of Americans are getting the pennies they should out of the trust fund. I very much regret the last minute dropping of that particular portion of the bill because it would have only given you between today and sometime this fall to give us some input as to whether or not we are treating older retirees fairly. Now the time is running and the next time we get a chance to give you that direction will probably be sometime this fall, too late—too late, mind you, to do anything about the cost-of-living adjustment for 1988.

Mrs. NORWOOD. You will recall, Senator, that one of the issues we also discussed was the use of the CPI–U rather than the CPI–W for escalation of Social Security benefits.

Senator MELCHER. Yes, I do recall that, and I recall exactly how that came about. It's simply because that amendment was in here that we're beginning to hear that the CPI–W, the index that is used and does form the basis for the cost-of-living adjustment, doesn't even include any retirees.

Now we're hearing, well, we could change the CPI-U. The only reason we're hearing that now is because the issue was raised was this fair or wasn't this fair? We'd like to get at what the fairness part of this is and that is to look specifically at those items that the retirees must pay—older people must pay in order to live. And they do have a different market basket for the things that they must buy and we've gone over that before and you know it even better than I. So I won't repeat it here, except to say that means health care and public transportation obviously went up 7 to 9 percent last year and those are things that older people have to buy and have to have. They have no choice, and a raise of 1.3 percent in the cost-of-living adjustment simply didn't reflect the inflation they had.

Mrs. **Norwood**. May I just say that it was in 1978 that the Bureau of Labor Statistics raised the issue of whether to use the CPI-U or the CPI-W in escalation of Social Security and other entitlement programs. That's not an issue that is new to us. At least we raised that publicly. It was discussed in the Congress.

The second point is that you're quite right that things like medical care would be weighted much more heavily in an index for the elderly, as would home heating oil, for example, and perhaps food. But such things as college tuition, new cars, and gasoline would be weighted somewhat lower in an index for older Americans.

And its's for those reasons that we really can't say one way or the other exactly what the final distribution would be and where this would come out, whether it would be higher or lower. That's really what I was trying to explain.

Our position—our function at the Bureau of Labor Statistics is to carry out the policy decisions of the Congress and the administration. We don't make policy. We try to be a service agency and if the Congress should decide that it wishes such an index we'll do our best to produce it, provided the resources are there.

One of my concerns about the amendment to the Appropriations Act was that it required us to do something within existing resources, and that would mean that we would have to take it from our employment programs or our other price programs and that would be difficult.

But I'm sure that if you wish to pursue that issue, that there are things that could be done.

Senator **Melcher**. Well, I'm sure, too. I only regret the stalling from this bill means that in all likelihood the people who like to stall for one reason or another are going to stall it for another year.

Senator **Sarbanes**. Commissioner, in light of this questioning, I want to be clear for the record on a couple of points.

First of all, as I understand your position, you indicated in this hearing that to produce a special index for older Americans, however we define that, would cost money. In other words, you would have to put some resources into doing it and, therefore, it would cost money. Is that correct?

Mrs. **Norwood**. To produce an accurate index, which included the expenditure experience of those groups that would be using an expenditure survey that was at least as reliable as the Consumer Price Index that is now being used for escalation, to go to the kinds of stores that older people go to, to use the specific items that older people buy, to use the particular prices that they pay since there are special senior citizens prices and so on, would be quite an expensive undertaking.

I did point out at the hearing that the Senator chaired that we could reweight the existing index with data from the existing expenditure survey. Such an index would have a much higher level of error than we would like, and it is our view that the result would be a kind of hybrid index. We could produce this hybrid index with very little cost—but if that were done, it should, in our view, be coupled with some expansion of survey work and some research to get a better handle on these other issues, so that eventually we could produce an index that would be as accurate as the current indexes that we have.

Senator SARBANES. All right. Now on the substantive question of whether a separate special index for older Americans would give them more of a cost-of-living adjustment or less of a cost-of-living adjustment than the current index, which is a general one for everybody——

Senator MELCHER. Would you yield on that point? That's a significant point. The current index does not include any older Americans, any retirees. It's only urban—I don't know whether I should use white collar and blue collar, but in general, it's urban people working for a living, not retirees.

Mrs. NORWOOD. That's the CPI-W, not the CPI-U.

Senator MELCHER. That does not have any of the retirees in it.

Senator SARBANES. Does the CPI-U differ from the CPI-W in any significant way?

Mrs. NORWOOD. Yes. The CPI-U represents all urban consumers, including the retired. The CPI-W represents less than half of the urban population and represents only those families where more than half of the income comes from a wage earner or clerical worker.

Senator SARBANES. And is there a significant difference in what those two indexes reflect?

Mrs. NORWOOD. There are some significant differences in the weights, the expenditure weights, the relative importance. There is not a great deal of difference in the movement of those two, but there are occasionally some differences that do come in one or another of the two indexes. They are small.

Senator SARBANES. But in any event, I take it on the question of whether it would show more or less, you just don't know the answer to it?

Mrs. NORWOOD. That's right.

Senator SARBANES. You wouldn't know that answer unless you actually did the study, is that correct?

Mrs. NORWOOD. That's correct.

Senator SARBANES. Now third, because I just want to make sure, you or your staff had no contact with the conferees, is that correct?

Mrs. NORWOOD. We have not. I'm sure the Department of Labor Congressional Affairs staff has and I know that the Bureau of Labor Statistics' position, which I suppose was carried out or communicated by the Department of Labor Congressional Affairs staff, was that the provision which required us to do this within existing resources, I believe was the way it was phrased, was really unacceptable.

Senator SARBANES. If you were provided with the resources and the policy direction to do it, you would do it, of course, would you not?

Mrs. NORWOOD. Certainly, of course. We'd do it to the best of our ability.

Senator SARBANES. And in fact, would see some argument for doing it, I take it, in order to address the question that keeps coming up as to whether the consumer price adjustment is treating older people fairly.

Mrs. NORWOOD. I think that one of the witnesses that the Senator had at that hearing expressed it extremely well. That was Arthur Fleming, who said there is a serious credibility question. The indexes might be the same, but if people knew that it reflected older Americans, they would believe it. And now they are unsure whether there may be some differences.

The reason that we don't know whether there would be differences is because when you look at the various components of the CPI and you look at those which have higher weight and which also have higher rates of price increase, you need to balance those by others which would have a lower weight in an index for older Americans and which also may have a higher price change.

So there may be some balancing here and we don't really know exactly how much.

The thing that concerns me is that if we produce some kind of hybird index, and people didn't like the result, whatever that result might be, then they would begin to raise the question of how accurate that index was and compare it to the other indexes.

Senator SARBANES. Well, that index would lack credibility, too. If you're going to do it, you need to produce an index that has credibility and is going to answer the question, do you not?

Mrs. NORWOOD. Yes, sir. That's our feeling.

Senator SARBANES. But if a judgment were made that we ought to address this credibility question and the resources were provided to the Bureau with which to do it, you would be happy to undertake that task, I take it?

Mrs. NORWOOD. We are a service agency and we are prepared to do whatever the Congress requests that we do.

I would like to make one point, however, and that is that to expand the survey work for consumer expenditures and the stores to which people go, we estimate that we might have to go visit as many as eight households in order to get one that would fit into this group. That's very expensive.

One way to shortcut that, both in time and in cost, would be if we could sample the names and addresses of the Social Security files. We are not able to do that. But that would be a very good shortcut, an efficiency approach, to getting at the population that we would want to measure. So that ought to be taken into consideration.

Senator SARBANES. Congressman McMillan.

Representative MCMILLAN. Thank you, Mr. Chairman.

One of the things that would strike me that would present an aggravating problem would be that if you start trying to differentiate in the Consumer Price Index as applied to entitlements, a possible—maybe a probable—result is that index might be below the average so that there would be times at which the Consumer Price Index for retirees might be below the average CPI-W or the CPI-U and I can imagine the reaction that would occur if that then were applied to programs. And some of the factors that you consider where we've seen wide swings in price levels over the past several years could possibly have produced that in such an index within the past several years.

The other thing that troubles me—I came out of at one point in my life the retail food industry and we know how the then statistics were determined that covered food prices and yet in the marketplace you had constantly shifting patterns of consumption. You had the shift from base commodities to packaged products which built a price factor in real terms into the consumer's pocketbook that weren't necessarily reflected in the statistics, or you had a shift from the consumption of beef to poultry, which people do for health reasons or perhaps for price reasons. These things don't get reflected either.

To what degree would such an index attempt to react to those changes in behavior?

Mrs. NORWOOD. The Consumer Price Index is basically a base weighted index in which we try to isolate price change and it does not, except in a revision, take account of the kinds of switches that you were talking about.

We do have methods of trying to adjust the specific items that we select to take account of that and we do revise the item sample and the outlet sample without changing the weight at the higher levels of aggregation on a 5-year cycle. So one-fifth of the cities in the index are revised each year.

It's interesting to note that during the 1970's this was a major issue and I testified many times before the Congress. It was a major issue because there was the view that because gasoline prices were so high after the oil embargoes that Social Security escalation might be higher than it really needed to be because the CPI had a relatively high weight for gasoline purchases which older Americans purchased less of than the average of the population.

Now, because of the concern for medical care, which Senator Melcher quite properly referred to, there is concern on the other side.

But that's why one has to look at this in terms of the total importance of each of the items in a family's budget. And I believe strongly that—you know, we go out and we price pants, for example, in the clothing component of the CPI, but we also have in that, because the general population purchases them, designer jeans. I don't know what the proportion of designer jeans that an older family would purchase. I doubt that it would be the same as for the population as a whole.

I know that my 89-year-old mother-in-law used to shop by picking up the telephone and calling the store across the street, which was a fairly high-priced store. They delivered. There were services provided because she couldn't get out to the supermarket six or eight blocks away.

Those are the kinds of things that we do not now take account of that we would really have to look at if we were to produce an accurate CPI. That would take some time. That would take some considerable research and experimentation.

As I've said, there are reweightings that could be done. They have been done. There have been a dozen studies on this subject thus far. But reweighting does not usually make a great deal of difference. It's the prices that move an index and where you get the prices and what items you select to price. And those are the things that we would really want to look at.

Representative **McMillan**. Thank you.

Senator **Sarbanes**. Well, thank you very much, Commissioner. We appreciate your appearance this morning and your testimony and we look forward to seeing you again next month.

Mrs. **Norwood**. Thank you very much.

[Whereupon, at 10:25 a.m., the committee adjourned, subject to the call of the Chair.]

EMPLOYMENT-UNEMPLOYMENT

FRIDAY, AUGUST 7, 1987

CONGRESS OF THE UNITED STATES,
JOINT ECONOMIC COMMITTEE,
Washington, DC.

The committee met, pursuant to notice, at 9:30 a.m., in room SD-628, Dirksen Senate Office Building, Hon. Paul S. Sarbanes (chairman of the committee) presiding.

Present: Senators Sarbanes and Melcher, and Representatives Hawkins and McMillan.

Also present: William Buechner, professional staff member.

OPENING STATEMENT OF SENATOR SARBANES, CHAIRMAN

Senator **SARBANES**. The committee will come to order. We're very pleased this morning to again welcome back before the committee Janet Norwood, the Commissioner of the Bureau of Labor Statistics, recently reappointed and confirmed to another 4-year term.

And the Commissioner will, as is our practice, bring before the committee her regular monthly examination of the employment and unemployment situation in the United States.

Commissioner Norwood, we're pleased to welcome you and your colleagues before the committee again; and we would be happy to hear from you.

STATEMENT OF HON. JANET L. NORWOOD, COMMISSIONER, BUREAU OF LABOR STATISTICS, DEPARTMENT OF LABOR, ACCOMPANIED BY THOMAS J. PLEWES, ASSOCIATE COMMISSIONER, OFFICE OF EMPLOYMENT AND UNEMPLOYMENT STATISTICS; AND KENNETH V. DALTON, ASSOCIATE COMMISSIONER, OFFICE OF PRICES AND LIVING CONDITIONS

Mrs. **NORWOOD**. Thank you very much, Mr. Chairman. As usual, I have with me Kenneth Dalton, our price expert, and Tom Plewes, our employment-unemployment expert.

As always, we are very pleased to be here to try to offer a few comments on our press release this morning.

Employment rose in July, and the labor force increased. The total and the civilian unemployment rates—at 5.9 and 6 percent—each sustained the downward trend of recent months. Both rates have dropped by a full percentage point over the last year.

Total civilian employment, as measured by the household survey, rose by 470,000 in July. Payroll employment, as measured by the business survey, rose by about 300,000. In July, industrial activity is usually curtailed and payroll employment declines. This year, those job reductions were much less than usual.

After seasonal adjustment, the manufacturing industry gained 70,000 jobs. This increase occurred despite a decline of nearly 40,000 in automobile manufacturing, which we understand resulted primarily from temporary layoffs related to model changeover and inventory reduction.

The BLS diffusion index, which reflects the dispersion of job growth primarily in manufacturing, rose to 66 percent, a very high level. This improvement occurred even as the factory workweek was maintained at the unusually high level of 41 hours.

This is good news. But, as we have discussed before, we need more than a single month's data to establish a new trend. Over the past year, factory employment has grown by 150,000, but nearly half of that increase occurred in July. Indeed, manufacturing has still only recouped about one-half of the jobs lost during the 1981-82 recession.

Elsewhere in the goods-producing sector, jobs in the oil and gas extraction industry continued to increase. Employment in this industry has risen slowly but steadily for sometime now, as changes have occurred in the international market for oil and as the price for oil continues to move upward.

The number of jobs in construction held steady from June to July; in fact, construction employment has changed very little over the last 6 months.

As has been the case each month for several years now, employment in the service sector continued upward in July. The number of jobs in the services industry itself rose by 80,000 from June to July—about the average monthly increase we've seen in this industry for sometime now.

Employment in retail trade rose by 60,000, following sluggish performance in May and June. The finance, insurance, and real estate industry continued to gain jobs, but recent increases have been smaller than those of the past few years.

The civilian jobless rate, although little changed in July, has shown marked improvement in recent months. The rate has dropped by seven-tenths of a point in only 5 months. Both adult men and adult women have participated in this improvement. At 5.4 percent, their rates are about half a percentage point lower than they were earlier in the year.

Teenagers, like adults, have also experienced a recent reduction in joblessness; their unemployment rate fell from about 18 percent earlier in the year to July's 15.5 percent.

The jobless rate for Hispanics has improved even faster than those for blacks and for whites.

One problem area in the data for July is that the number of workers employed part time for economic reasons rose by 325,000 to 5.5 million. This series, which had been trending downward in recent months, often fluctuates from one month to the next.

Thus, we really need additional months of data to determine the significance of the July change. The jobless measure with special adjustments for both voluntary and economic part-time labor market experience—that is, U-6 published in our press release—

was 8.3 percent in July, still high, but down a full percentage point from last year.

Changes in the labor force and employment in May, June, and July are usually large and often are quite volatile.

This year's data certainly fit that description. For example, a seasonally adjusted civilian labor force decline of nearly half a million in June was offset by an almost-as-large increase in July.

Such movements often occur because the survey week, which includes the 12th of the month, can start as early as the 6th or as late as the 12th.

Particularly in the summer months when schools close, this timing can have a critical effect on the size of the labor force and employment estimates.

For example, after seasonal adjustment, employment changed little in June and rose by 470,000 in July. The important thing to note, however, is that employment is up by 900,000 since April.

In summary, July's labor market developments were positive. The unemployment rate has improved over the last several months, and strong and widespread employment growth occurred in July.

Mr. Chairman, I'd like to make just a short comment about our productivity data for the second quarter which was released this week.

For the business economy, productivity increased at a much higher rate than in the first quarter—1.3 percent annual rate versus 0.5 percent. While encouraging, the productivity increase in the second quarter reflected gains in output and hours that were smaller than those of the first quarter.

For the year as a whole, only a 0.3 percent productivity gain took place.

Manufacturing continued to do very well, increasing at a rate of 3.3 percent, after a 3-percent gain in the first quarter. For the year as a whole, the increase was 2.8 percent.

This manufacturing experience is very encouraging, because these recent gains are similar to those before the productivity growth slowdown which started in the early 1970's.

The BLS productivity series released this week incorporate the recently revised GNP data. These revisions affected the productivity measures for the last 3 years. The revisions were substantial; with the new GNP data productivity growth is stronger than had previously been reported.

From 1983 through 1986, productivity grew at an annual rate of 2.1 percent for the business economy, in contrast to the previously reported rate 1.3 percent.

One benefit of this more rapid productivity growth is the effect on unit labor costs. Since hourly compensation has risen more slowly than in past recoveries, increasing productivity has contributed to very slow growth in unit labor costs.

In manufacturing, where productivity gains have been most rapid, unit labor costs have actually declined.

As we know, many of our trading partners have been experiencing rising unit labor costs during recent years. When the strong appreciation of the yen and European currencies are taken into account, manufacturing unit labor costs rose over 40 percent in

Japan between 1985 and 1986 and about 20 to 40 percent in European countries.

Now, there's additional information corroborating these data on labor cost trends which comes from the recent BLS release on the Employment Cost Index (ECI). Compensation, which includes benefits as well as wages and salaries, in the ECI rose 3.3 percent in the year ending June 1987, compared with a 4-percent gain a year ago.

The 3-percent wage and salary gain for private industry workers was the lowest over-the-year pay gain recorded in the ECI's 11-year history.

Mr. Chairman, we would now be very happy to answer any questions.

Senator SARBANES. Thank you very much, Commissioner, for your usual thorough and comprehensive statement.

[The table attached to Mrs. Norwood's statement, together with the Employment Situation press release, follows:]

Unemployment rates of all civilian workers by alternative seasonal adjustment methods

Month and year	Unadjusted rate	X-11 ARIMA method							X-11 method (official method before 1980)	Range (cols. 2-9)
		Official procedure	Concurrent (as first computed)	Concurrent (revised)	Stable	Total	Residual	12-month extrapolation		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1986										
July........	7.0	7.0	7.0	7.0	7.0	6.9	7.0	6.9	7.0	.1
August......	6.7	6.8	6.8	6.8	6.8	6.9	7.0	6.8	6.8	.2
September...	6.8	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	-
October.....	6.6	6.9	6.9	7.0	7.0	6.9	6.9	7.0	7.0	.1
November....	6.6	6.9	6.9	6.9	6.9	6.9	7.0	6.9	7.0	.1
December....	6.3	6.7	6.7	6.7	6.6	6.7	6.7	6.7	6.7	.1
1987										
January.....	7.3	6.7	6.7	6.7	6.7	6.8	6.6	6.7	6.7	.2
February....	7.2	6.7	6.7	6.6	6.6	6.7	6.5	6.7	6.7	.2
March.......	6.9	6.6	6.6	6.5	6.6	6.6	6.5	6.6	6.6	.1
April.......	6.2	6.3	6.3	6.3	6.4	6.3	6.3	6.3	6.3	.1
May.........	6.1	6.3	6.3	6.3	6.4	6.3	6.4	6.3	6.3	.1
June........	6.3	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	-
July........	6.1	6.0	6.1	6.1	6.0	6.0	6.0	6.0	6.0	.1

SOURCE: U.S. DEPARTMENT OF LABOR
Bureau of Labor Statistics
August 1987

(1) Unadjusted rate. Unemployment rate for all civilian workers, not seasonally adjusted.

(2) Official procedure (X-11 ARIMA method). The published seasonally adjusted rate for all civilian workers. Each of the 3 major civilian labor force components--agricultural employment, nonagricultural employment and unemployment--for 4 age-sex groups--males and females, ages 16-19 and 20 years and over--are seasonally adjusted independently using data from January 1974 forward. The data series for each of these 12 components are extended by a year at each end of the original series using ARIMA (Auto-Regressive, Integrated, Moving Average) models chosen specifically for each series. Each extended series is then seasonally adjusted with the X-11 portion of the X-11 ARIMA program. The 4 teenage unemployment and nonagricultural employment components are adjusted with the additive adjustment model, while the other components are adjusted with the multiplicative model. The unemployment rate is computed by summing the 4 seasonally adjusted unemployment components and calculating that total as a percent of the civilian labor force total derived by summing all 12 seasonally adjusted components. All the seasonally adjusted series are revised at the end of each year. Extrapolated factors for January-June are computed at the beginning of each year; extrapolated factors for July-December are computed in the middle of the year after the June data become available. Each set of 6-month factors are published in advance, in the January and July issues, respectively, of Employment and Earnings.

(3) Concurrent (as first computed, X-11 ARIMA method). The official procedure for computation of the rate for all civilian workers using the 12 components is followed except that extrapolated factors are not used at all. Each component is seasonally adjusted with the X-11 ARIMA program each month as the most recent data become available. Rates for each month of the current year are shown as first computed; they are revised only once each year, at the end of the year when data for the full year become available. For example, the rate for January 1984 would be based, during 1984, on the adjustment of data from the period January 1974 through January 1984.

(4) Concurrent (revised, X-11 ARIMA method). The procedure used is identical to (3) above, and the rate for the current month (the last month displayed) will always be the same in the two columns. However, all previous months are subject to revision each month based on the seasonal adjustment of all the components with data through the current month.

(5) Stable (X-11 ARIMA method). Each of the 12 civilian labor force components is extended using ARIMA models as in the official procedure and then run through the X-11 part of the program using the stable option. This option assumes that seasonal patterns are basically constant from year-to-year and computes final seasonal factors as unweighted averages of all the seasonal-irregular components for each month across the entire span of the period adjusted. As in the official procedure, factors are extrapolated in 6-month intervals and the series are revised at the end of each year. The procedure for computation of the rate from the seasonally adjusted components is also identical to the official procedure.

(6) Total (X-11 ARIMA method). This is one alternative aggregation procedure, in which total unemployment and civilian labor force levels are extended with ARIMA models and directly adjusted with multiplicative adjustment models in the X-11 part of the program. The rate is computed by taking seasonally adjusted total unemployment as a percent of seasonally adjusted total civilian labor force. Factors are extrapolated in 6-month intervals and the series revised at the end of each year.

(7) Residual (X-11 ARIMA method). This is another alternative aggregation method, in which total civilian employment and civilian labor force levels are extended using ARIMA models and then directly adjusted with multiplicative adjustment models. The seasonally adjusted unemployment level is derived by subtracting seasonally adjusted employment from seasonally adjusted labor force. The rate is then computed by taking the derived unemployment level as a percent of the labor force level. Factors are extrapolated in 6-month intervals and the series revised at the end of each year.

(8) 12-month extrapolation (X-11 ARIMA method). This approach is the same as the official procedure except that the factors are extrapolated in 12-month intervals. The factors for January-December of the current year are computed at the beginning of the year based on data through the preceding year. The values for January through June of the current year are the same as the official values since they reflect the same factors.

(9) X-11 method (official method before 1980). The method for computation of the official procedure is used except that the series are not extended with ARIMA models and the factors are projected in 12-month intervals. The standard X-11 program is used to perform the seasonal adjustment.

Methods of Adjustment: The X-11 ARIMA method was developed at Statistics Canada by the Seasonal Adjustment and Times Series Staff under the direction of Estela Bee Dagum. The method is described in The X-11 ARIMA Seasonal Adjustment Method, by Estela Bee Dagum, Statistics Canada Catalogue No. 12-564E, February 1980.

The standard X-11 method is described in X-11 Variant of the Census Method II Seasonal Adjustment Program, by Julius Shiskin, Allan Young and John Musgrave (Technical Paper No. 15, Bureau of the Census, 1967).

News
United States
Department
of Labor

Bureau of Labor Statistics
Washington, D.C. 20212

Technical information:	(202) 523-1371 523-1944 523-1959	USDL 87-344
Media contact:	523-1913	TRANSMISSION OF MATERIAL IN THIS RELEASE IS EMBARGOED UNTIL 8:30 A.M. (EDT), FRIDAY, AUGUST 7, 1987

THE EMPLOYMENT SITUATION: JULY 1987

Employment rose substantially in July, while unemployment was little changed, the Bureau of Labor Statistics of the U.S. Department of Labor reported today. The overall unemployment rate was 5.9 percent, and the rate for civilian workers was 6.0 percent. Both were a full percentage point lower than a year earlier, with the improvement particularly strong since February.

Total civilian employment--as measured by the monthly survey of households--rose by 470,000 in July. The number of nonagricultural payroll jobs--as measured by the monthly survey of establishments--was up by 300,000. Over the past year, the two employment series have advanced by 2.8 and 2.5 million, respectively.

Unemployment (Household Survey Data)

Both the number of unemployed persons, 7.2 million in July, and the civilian unemployment rate, 6.0 percent, were little changed from June, after seasonal adjustment. Similarly, jobless rates for adult men and women (both at 5.4 percent), teenagers (15.5 percent), whites (5.1 percent), blacks (12.6 percent), and Hispanics (7.9 percent) all showed little change between June and July. Over the past year, however, unemployment rates dropped considerably for all these worker groups. (See tables A-2 and A-3.)

The number of persons jobless for 15 weeks or more fell by about 150,000 in July to 1.9 million, the lowest level since June 1980. The average (mean) duration of unemployment fell from 14.8 weeks in June to 14.0 weeks in July. (See table A-7.)

Civilian Employment and the Labor Force (Household Survey Data)

Civilian employment rose by 470,000 in July to 112.7 million on a seasonally adjusted basis. Over the year, employment increased by 2.8 million, with adult women accounting for 1.4 million of the gain, adult men for 1.2 million, and teenagers for 200,000. (See table A-2.)

The civilian labor force increased by about 435,000 in July, after seasonal adjustment, following a drop of similar magnitude in the previous month. Prior to seasonal adjustment, very large labor force increases typically occur in the April-to-July period, as young people leave school and enter the summer job market. This often results in uneven

Table A. Major indicators of labor market activity, seasonally adjusted

Category	Quarterly averages		Monthly data			June-July change
	1987		1987			
	I	II	May	June	July	
HOUSEHOLD DATA						
	Thousands of persons					
Labor force 1/	120,943	121,341	121,719	121,235	121,672	437
Total employment 1/	112,995	113,906	114,173	113,975	114,447	472
Civilian labor force	119,202	119,615	119,993	119,517	119,952	435
Civilian employment	111,254	112,180	112,447	112,257	112,727	470
Unemployment	7,948	7,435	7,546	7,260	7,224	-36
Not in labor force	62,800	62,912	62,540	63,187	62,933	-254
Discouraged workers	1,168	1,037	N.A.	N.A.	N.A.	N.A.
	Percent of labor force					
Unemployment rates:						
All workers 1/	6.6	6.1	6.2	6.0	5.9	-0.1
All civilian workers	6.7	6.2	6.3	6.1	6.0	-.1
Adult men	5.9	5.5	5.5	5.5	5.4	-.1
Adult women	5.8	5.4	5.4	5.2	5.4	.2
Teenagers	17.9	17.0	17.7	15.9	15.5	-.4
White	5.7	5.3	5.3	5.2	5.1	-.1
Black	14.2	13.2	13.8	12.7	12.6	-.1
Hispanic origin	9.7	8.8	8.7	8.5	7.9	-.6
ESTABLISHMENT DATA						
	Thousands of jobs					
Nonfarm employment	101,133	p101,706	101,708	p101,811	p102,115	p304
Goods-producing	24,733	p24,762	24,752	p24,775	p24,849	p74
Service-producing	76,399	p76,944	76,956	p77,036	p77,266	p230
	Hours of work					
Average weekly hours:						
Total private	34.8	p34.8	34.9	p34.8	p34.7	p-0.1
Manufacturing	41.0	p40.9	41.0	p41.0	p41.0	p0
Overtime	3.6	p3.7	3.8	p3.7	p3.8	p.1

1/ Includes the resident Armed Forces. N.A.=not available.
p=preliminary.

month-to-month changes in the labor force, even after seasonal adjustment. During this year's summer expansion period, the labor force was up about 600,000 after seasonal adjustment. (See table A-2.)

Industry Payroll Employment (Establishment Survey Data)

Total nonagricultural employment rose by about 300,000 in July to 102.1 million, after seasonal adjustment. This increase followed 2 months of slow job growth in business establishments. While the service-producing sector accounted for most of the over-the-month employment increase, as it usually does, job gains were also widespread in manufacturing industries, after seasonal adjustment. (See table B-1.)

In the goods-producing sector, manufacturing employment rose by 70,000, to 19.1 million in July. This gain occurred despite an employment decline of 40,000 in motor vehicles and equipment, primarily reflecting model changeover and inventory adjustments. Construction employment was unchanged in July and has experienced little movement, on a seasonally adjusted basis, since January. The number of jobs in mining and its oil and gas extraction component edged up, continuing a recent trend of small employment gains.

In the service-producing sector, the services industry rose by 80,000 in July, paced by a 35,000 gain in its health services component. Employment in retail trade advanced by 60,000, following 2 months of little change. The finance, insurance, and real estate industry continued to expand, gaining 20,000 jobs in July.

Weekly Hours (Establishment Survey Data)

The average workweek of production or nonsupervisory workers on private nonagricultural payrolls edged down 0.1 hour in July to 34.7 hours, seasonally adjusted. Manufacturing hours remained at very high levels. The workweek was at 41.0 hours for the third month in a row, and factory overtime edged back up to 3.8 hours. (See table B-2.)

The index of aggregate weekly hours of production or nonsupervisory workers on private nonagricultural payrolls increased 0.3 percent to 120.3 (1977=100), seasonally adjusted. Reflecting July's employment gains, the manufacturing index rose by 0.5 percent to 93.7. (See table B-5.)

Hourly and Weekly Earnings (Establishment Survey Data)

Average hourly earnings and average weekly earnings were little changed on a seasonally adjusted basis in July. Prior to seasonal adjustment, hourly earnings decreased by 1 cent to $8.91, and weekly earnings were down 35 cents to $311.85. (See table B-3.)

The Hourly Earnings Index (Establishment Survey Data)

The Hourly Earnings Index (HEI) was 173.2 (1977=100) in July, seasonally adjusted, an increase of 0.2 percent from June. For the 12 months ended in July, the increase was 2.4 percent. The HEI excludes the effects of two types of changes unrelated to underlying wage rate movements--fluctuations in manufacturing overtime and interindustry employment shifts. In dollars of constant purchasing power, the HEI decreased 1.4 percent during the 12-month period ended in June. (See table B-4.)

The Employment Situation for August 1987 will be released on Friday, September 4, at 8:30 A.M. (EDT).

Explanatory Note

This news release presents statistics from two major surveys, the Current Population Survey (household survey) and the Current Employment Statistics Survey (establishment survey). The household survey provides the information on the labor force, total employment, and unemployment that appears in the A tables, marked HOUSEHOLD DATA. It is a sample survey of about 59,500 households that is conducted by the Bureau of the Census with most of the findings analyzed and published by the Bureau of Labor Statistics (BLS).

The establishment survey provides the information on the employment, hours, and earnings of workers on nonagricultural payrolls that appears in the B tables, marked ESTABLISHMENT DATA. This information is collected from payroll records by BLS in cooperation with State agencies. The sample includes over 290,000 establishments employing over 38 million people.

For both surveys, the data for a given month are actually collected for and relate to a particular week. In the household survey, unless otherwise indicated, it is the calendar week that contains the 12th day of the month, which is called the survey week. In the establishment survey, the reference week is the pay period including the 12th, which may or may not correspond directly to the calendar week.

The data in this release are affected by a number of technical factors, including definitions, survey differences, seasonal adjustments, and the inevitable variance in results between a survey of a sample and a census of the entire population. Each of these factors is explained below.

Coverage, definitions, and differences between surveys

The sample households in the household survey are selected so as to reflect the entire civilian noninstitutional population 16 years of age and older. Each person in a household is classified as employed, unemployed, or not in the labor force. Those who hold more than one job are classified according to the job at which they worked the most hours.

People are classified as *employed* if they did any work at all as paid civilians; worked in their own business or profession or on their own farm; or worked 15 hours or more in an enterprise operated by a member of their family, whether they were paid or not. People are also counted as employed if they were on unpaid leave because of illness, bad weather, disputes between labor and management, or personal reasons. Members of the Armed Forces stationed in the United States are also included in the employed total.

People are classified as *unemployed*, regardless of their eligibility for unemployment benefits or public assistance, if they meet all of the following criteria: They had no employment during the survey week; they were available for work at that time; and they made specific efforts to find employment sometime during the prior 4 weeks. Persons laid off from their former jobs and awaiting recall and those expecting to report to a job within 30 days need not be looking for work to be counted as unemployed.

The *labor force* equals the sum of the number employed and the number unemployed. The *unemployment rate* is the percentage of unemployed people in the labor force (civilian plus the resident Armed Forces). Table A-5 presents a special grouping of seven measures of unemployment based on varying definitions of unemployment and the labor force. The definitions are provided in the table. The most restrictive definition yields U-1 and the most comprehensive yields U-7. The overall unemployment rate is U-5a, while U-5b represents the same measure with a civilian labor force base.

Unlike the household survey, the establishment survey only counts wage and salary employees whose names appear on the payroll records of nonagricultural firms. As a result, there are many differences between the two surveys, among which are the following:

- The household survey, although based on a smaller sample, reflects a larger segment of the population; the establishment survey excludes agriculture, the self-employed, unpaid family workers, private household workers, and members of the resident Armed Forces;
- The household survey includes people on unpaid leave among the employed; the establishment survey does not;
- The household survey is limited to those 16 years of age and older; the establishment survey is not limited by age;
- The household survey has no duplication of individuals, because each individual is counted only once; in the establishment survey, employees working at more than one job or otherwise appearing on more than one payroll would be counted separately for each appearance.

Other differences between the two surveys are described in "Comparing Employment Estimates from Household and Payroll Surveys," which may be obtained from the BLS upon request.

Seasonal adjustment

Over the course of a year, the size of the Nation's labor force and the levels of employment and unemployment undergo sharp fluctuations due to such seasonal events as changes in weather, reduced or expanded production, harvests, major holidays, and the opening and closing of schools. For example, the labor force increases by a large number each June, when schools close and many young people enter the job market. The effect of such seasonal variation can be very large; over the course of a year, for example, seasonality may account for as much as 95 percent of the month-to-month changes in unemployment.

Because these seasonal events follow a more or less regular pattern each year, their influence on statistical trends can be eliminated by adjusting the statistics from month to month. These adjustments make nonseasonal developments, such as declines in economic activity or increases in the participation of women in the labor force, easier to spot. To return to the school's-out example, the large number of people entering the labor force each June is likely to obscure any other changes that have taken place since May, making it difficult to determine if the level of economic activity has risen or declined. However, because the effect of students finishing school in previous years is known, the statistics for the current year can be adjusted to allow for a comparable change. Insofar as the seasonal adjustment is made correctly, the adjusted figure provides a more useful tool with which to analyze changes in economic activity.

Measures of labor force, employment, and unemployment contain components such as age and sex. Statistics for all employees, production workers, average weekly hours, and average hourly earnings include components based on the employer's industry. All these statistics can be seasonally adjusted either by adjusting the total or by adjusting each of the components and combining them. The second procedure usually yields more accurate information and is therefore followed by BLS. For example, the seasonally adjusted figure for the labor force is the sum of eight seasonally adjusted civilian employment components, plus the resident Armed Forces total (not adjusted for seasonality), and four seasonally adjusted unemployment components; the total for unemployment is the sum of the four unemployment components; and the overall unemployment rate is derived by dividing the resulting estimate of total unemployment by the estimate of the labor force.

The numerical factors used to make the seasonal adjustments are recalculated regularly. For the household survey, the factors are calculated for the January-June period and again for the July-December period. The January revision is applied to data that have been published over the previous 5 years. For the establishment survey, updated factors for seasonal adjustment are calculated only once a year, along with the introduction of new benchmarks which are discussed at the end of the next section.

Sampling variability

Statistics based on the household and establishment surveys are subject to sampling error, that is, the estimate of the number of people employed and the other estimates drawn from these surveys probably differ from the figures that would be obtained from a complete census, even if the same questionnaires and procedures were used. In the household survey, the amount of the differences can be expressed in terms of standard errors. The numerical value of a standard error depends upon the size of the sample, the results of the survey, and other factors. However, the numerical value is always such that the chances are approximately 68 out of 100 that an estimate based on the sample will differ by no more than the standard error from the results of a complete census. The chances are approximately 90 out of 100 that an estimate based on the sample will differ by no more than 1.6 times the standard error from the results of a complete census. At approximately the 90-percent level of confidence—the confidence limits used by BLS in its analyses—the error for the monthly change in total employment is on the order of plus or minus 328,000; for total unemployment it is 220,000; and, for the overall unemployment rate, it is 0.19 percentage point. These figures do not mean that the sample results are off by these magnitudes but, rather, that the chances are approximately 90 out of 100 that the "true" level or rate would not be expected to differ from the estimates by more than these amounts.

Sampling errors for monthly surveys are reduced when the data are cumulated for several months, such as quarterly or annually. Also, as a general rule, the smaller the estimate, the larger the sampling error. Therefore, relatively speaking, the estimate of the size of the labor force is subject to less error than is the estimate of the number unemployed. And, among the unemployed, the sampling error for the jobless rate of adult men, for example, is much smaller than is the error for the jobless rate of teenagers. Specifically, the error on monthly change in the jobless rate for men is .26 percentage point; for teenagers, it is 1.25 percentage points.

In the establishment survey, estimates for the 2 most current months are based on incomplete returns; for this reason, these estimates are labeled preliminary in the tables. When all the returns in the sample have been received, the estimates are revised. In other words, data for the month of September are published in preliminary form in October and November and in final form in December. To remove errors that build up over time, a comprehensive count of the employed is conducted each year. The results of this survey are used to establish new benchmarks—comprehensive counts of employment—against which month-to-month changes can be measured. The new benchmarks also incorporate changes in the classification of industries and allow for the formation of new establishments.

Additional statistics and other information

In order to provide a broad view of the Nation's employment situation, BLS regularly publishes a wide variety of data in this news release. More comprehensive statistics are contained in *Employment and Earnings*, published each month by BLS. It is available for $8.50 per issue or $22.00 per year from the U.S. Government Printing Office, Washington, D.C., 20204. A check or money order made out to the Superintendent of Documents must accompany all orders.

Employment and Earnings also provides approximations of the standard errors for the household survey data published in this release. For unemployment and other labor force categories, the standard errors appear in tables B through J of its "Explanatory Notes." Measures of the reliability of the data drawn from the establishment survey and the actual amounts of revision due to benchmark adjustments are provided in tables M, O, P, and Q of that publication.

Table A-1. Employment status of the population, including Armed Forces in the United States, by sex

(Numbers in thousands)

Employment status and sex	Not seasonally adjusted			Seasonally adjusted[1]					
	July 1986	June 1987	July 1987	July 1986	Mar. 1987	Apr. 1987	May 1987	June 1987	July 1987
TOTAL									
Noninstitutional population[1]	182,354	184,421	184,605	182,354	183,915	184,079	184,259	184,421	184,605
Labor force[2]	121,975	122,871	123,825	119,789	120,958	121,070	121,719	121,235	121,672
Participation rate[3]	66.9	66.6	67.1	65.7	65.8	65.8	66.1	65.7	65.9
Total employed[2]	113,504	115,216	116,372	111,559	113,104	113,570	114,173	113,975	114,447
Employment-population ratio[4]	62.2	62.5	63.0	61.2	61.5	61.7	62.0	61.8	62.0
Resident Armed Forces	1,672	1,718	1,720	1,672	1,736	1,735	1,726	1,718	1,720
Civilian employed	111,832	113,498	114,652	109,887	111,368	111,835	112,447	112,257	112,727
Agriculture	3,655	3,661	3,754	3,124	3,284	3,290	3,335	3,178	3,219
Nonagricultural industries	108,176	109,837	110,898	106,763	108,084	108,545	109,112	109,079	109,508
Unemployed	8,471	7,655	7,453	8,230	7,854	7,500	7,546	7,260	7,224
Unemployment rate[5]	6.9	6.2	6.0	6.9	6.5	6.2	6.2	6.0	5.9
Not in labor force	60,379	61,550	60,779	62,565	62,957	63,009	62,540	63,187	62,933
Men, 16 years and over									
Noninstitutional population[1]	87,373	88,442	88,534	87,373	88,186	88,271	88,361	88,442	88,534
Labor force[2]	68,668	68,803	69,338	66,968	67,644	67,603	67,816	67,556	67,656
Participation rate[3]	78.6	77.8	78.3	76.6	76.7	76.6	76.7	76.4	76.4
Total employed[2]	64,086	64,604	65,375	62,402	63,282	63,417	63,562	63,471	63,715
Employment-population ratio[4]	73.3	73.0	73.8	71.4	71.8	71.8	71.9	71.8	72.0
Resident Armed Forces	1,518	1,559	1,561	1,518	1,575	1,575	1,566	1,559	1,561
Civilian employed	62,568	63,045	63,814	60,884	61,707	61,842	61,996	61,912	62,154
Unemployed	4,582	4,199	3,963	4,566	4,362	4,186	4,254	4,085	3,941
Unemployment rate[5]	6.7	6.1	5.7	6.8	6.4	6.2	6.3	6.0	5.8
Women, 16 years and over									
Noninstitutional population[1]	94,981	95,979	96,071	94,981	95,729	95,808	95,898	95,979	96,071
Labor force[2]	53,306	54,068	54,488	52,821	53,314	53,467	53,903	53,679	54,016
Participation rate[3]	56.1	56.3	56.7	55.6	55.7	55.8	56.2	55.9	56.2
Total employed[2]	49,417	50,612	50,998	49,157	49,822	50,153	50,611	50,504	50,733
Employment-population ratio[4]	52.0	52.7	53.1	51.8	52.0	52.3	52.8	52.6	52.8
Resident Armed Forces	154	159	159	154	161	160	160	159	159
Civilian employed	49,263	50,453	50,839	49,003	49,661	49,993	50,451	50,345	50,574
Unemployed	3,889	3,456	3,490	3,664	3,492	3,314	3,292	3,175	3,283
Unemployment rate[5]	7.3	6.4	6.4	6.9	6.6	6.2	6.1	5.9	6.1

---

[1] The population and Armed Forces figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

[2] Includes members of the Armed Forces stationed in the United States.

[3] Labor force as a percent of the noninstitutional population.

[4] Total employment as a percent of the noninstitutional population.

[5] Unemployment as a percent of the labor force (including the resident Armed Forces).

Table A-2. Employment status of the civilian population by sex and age

[Numbers in thousands]

Employment status, sex, and age	Not seasonally adjusted			Seasonally adjusted[1]					
	July 1986	June 1987	July 1987	July 1986	Mar. 1987	Apr. 1987	May 1987	June 1987	July 1987
TOTAL									
Civilian noninstitutional population	180,682	182,703	182,885	180,682	182,179	182,344	182,533	182,703	182,885
Civilian labor force	120,303	121,153	122,105	118,117	119,222	119,335	119,993	119,517	119,952
Participation rate	66.6	66.3	66.8	65.4	65.4	65.4	65.7	65.4	65.6
Employed	111,832	113,498	114,652	109,887	111,368	111,835	112,447	112,257	112,727
Employment-population ratio[2]	61.9	62.1	62.7	60.8	61.1	61.3	61.6	61.4	61.6
Unemployed	8,471	7,655	7,453	8,230	7,854	7,500	7,546	7,260	7,226
Unemployment rate	7.0	6.3	6.1	7.0	6.6	6.3	6.3	6.1	6.0
Men, 20 years and over									
Civilian noninstitutional population	78,586	79,536	79,625	78,586	79,303	79,387	79,474	79,536	79,625
Civilian labor force	61,882	62,503	62,645	61,355	61,983	61,976	62,156	62,057	62,116
Participation rate	78.7	78.6	78.7	78.1	78.2	78.1	78.2	78.0	78.0
Employed	58,227	59,184	59,458	57,544	58,410	58,567	58,721	58,620	58,793
Employment-population ratio[2]	74.1	74.4	74.7	73.2	73.7	73.8	73.9	73.7	73.8
Agriculture	2,497	2,533	2,556	2,275	2,411	2,411	2,441	2,307	2,343
Nonagricultural industries	55,730	56,651	56,902	55,269	55,999	56,155	56,280	56,313	56,450
Unemployed	3,656	3,320	3,187	3,811	3,573	3,409	3,436	3,437	3,323
Unemployment rate	5.9	5.3	5.1	6.2	5.8	5.5	5.5	5.5	5.4
Women, 20 years and over									
Civilian noninstitutional population	87,629	88,546	88,632	87,629	88,321	88,395	88,464	88,546	88,632
Civilian labor force	48,517	49,502	49,564	48,879	49,355	49,466	49,774	49,714	49,971
Participation rate	55.4	55.9	55.9	55.8	55.9	56.0	56.3	56.1	56.4
Employed	45,408	46,896	46,811	45,869	46,498	46,751	47,094	47,126	47,288
Employment-population ratio[2]	51.8	53.0	52.8	52.3	52.6	52.9	53.2	53.2	53.4
Agriculture	733	711	749	607	589	587	634	615	619
Nonagricultural industries	44,675	46,186	46,062	45,262	45,909	46,164	46,460	46,512	46,669
Unemployed	3,109	2,606	2,753	3,010	2,857	2,715	2,680	2,588	2,683
Unemployment rate	6.4	5.3	5.6	6.2	5.8	5.5	5.4	5.2	5.4
Both sexes, 16 to 19 years									
Civilian noninstitutional population	14,467	14,621	14,628	14,467	14,555	14,562	14,595	14,621	14,628
Civilian labor force	9,903	9,147	9,896	7,883	7,884	7,894	8,063	7,746	7,865
Participation rate	68.5	62.6	67.6	54.5	54.2	54.2	55.2	53.0	53.8
Employed	8,197	7,418	8,383	6,474	6,460	6,518	6,633	6,511	6,647
Employment-population ratio[2]	56.7	50.7	57.3	44.8	44.4	44.8	45.4	44.5	45.4
Agriculture	426	418	448	242	284	292	261	257	258
Nonagricultural industries	7,771	7,000	7,934	6,232	6,176	6,226	6,372	6,254	6,389
Unemployed	1,706	1,729	1,513	1,409	1,424	1,376	1,430	1,235	1,218
Unemployment rate	17.2	18.9	15.3	17.9	18.1	17.4	17.7	15.9	15.5

[1] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

[2] Civilian employment as a percent of the civilian noninstitutional population.

Table A-3. Employment status of the civilian population by race, sex, age, and Hispanic origin

(Numbers in thousands)

Employment status, race, sex, age, and Hispanic origin	Not seasonally adjusted			Seasonally adjusted[1]					
	July 1986	June 1987	July 1987	July 1986	Mar. 1987	Apr. 1987	May 1987	June 1987	July 1987
WHITE									
Civilian noninstitutional population	155,502	156,930	157,058	155,502	156,561	156,676	156,811	156,930	157,058
Civilian labor force	103,790	104,409	104,987	102,015	102,797	102,894	103,573	103,106	103,272
Participation rate	66.7	66.5	66.8	65.6	65.7	65.7	66.1	65.7	65.8
Employed	97,559	98,796	99,609	95,861	96,998	97,340	98,050	97,716	97,958
Employment-population ratio[2]	62.7	63.0	63.4	61.6	62.0	62.1	62.5	62.3	62.4
Unemployed	6,231	5,613	5,378	6,154	5,799	5,554	5,524	5,390	5,314
Unemployment rate	6.0	5.4	5.1	6.0	5.6	5.4	5.3	5.2	5.1
Men, 20 years and over									
Civilian labor force	54,097	54,605	54,625	53,639	54,107	54,051	54,314	54,213	54,214
Participation rate	79.0	79.0	78.9	78.4	78.4	78.3	78.6	78.4	78.3
Employed	51,358	52,097	52,250	50,731	51,364	51,462	51,755	51,581	51,682
Employment-population ratio[2]	75.0	75.3	75.5	74.1	74.5	74.6	74.9	74.6	74.7
Unemployed	2,739	2,508	2,375	2,908	2,743	2,589	2,558	2,632	2,532
Unemployment rate	5.1	4.6	4.3	5.4	5.1	4.8	4.7	4.9	4.7
Women, 20 years and over									
Civilian labor force	41,237	41,932	41,927	41,584	41,828	41,982	42,239	42,159	42,280
Participation rate	54.9	55.3	55.3	55.3	55.3	55.5	55.8	55.6	55.7
Employed	38,951	40,076	39,975	39,368	39,839	40,041	40,343	40,318	40,379
Employment-population ratio[2]	51.8	52.9	52.7	52.4	52.7	52.9	53.2	53.2	53.2
Unemployed	2,286	1,856	1,951	2,216	1,989	1,941	1,895	1,841	1,902
Unemployment rate	5.5	4.4	4.7	5.3	4.8	4.6	4.5	4.4	4.5
Both sexes, 16 to 19 years									
Civilian labor force	8,456	7,872	8,436	6,792	6,862	6,861	7,021	6,734	6,778
Participation rate	71.2	65.8	70.5	57.2	57.5	57.4	58.7	56.3	56.6
Employed	7,250	6,623	7,384	5,762	5,795	5,837	5,951	5,817	5,898
Employment-population ratio[2]	61.1	55.4	61.7	48.5	48.5	48.9	49.8	48.6	49.3
Unemployed	1,206	1,249	1,051	1,030	1,067	1,024	1,070	917	880
Unemployment rate	14.3	15.9	12.5	15.2	15.5	14.9	15.2	13.6	13.0
Men	14.3	16.0	12.1	15.6	17.1	16.7	17.3	14.5	13.0
Women	14.3	15.8	12.8	14.7	13.9	13.1	13.1	12.7	13.0
BLACK									
Civilian noninstitutional population	20,002	20,341	20,373	20,002	20,249	20,279	20,312	20,341	20,373
Civilian labor force	13,041	13,133	13,468	12,611	12,844	12,743	12,860	12,863	13,047
Participation rate	65.2	64.6	66.1	63.0	63.4	62.8	63.3	63.2	64.0
Employed	11,074	11,346	11,645	10,822	11,053	11,090	11,080	11,223	11,401
Employment-population ratio[2]	55.4	55.8	57.2	54.1	54.6	54.7	54.6	55.2	56.0
Unemployed	1,967	1,787	1,823	1,789	1,791	1,653	1,779	1,640	1,647
Unemployment rate	15.1	13.6	13.5	14.2	13.9	13.0	13.8	12.7	12.6
Men, 20 years and over									
Civilian labor force	6,015	6,063	6,159	5,939	5,997	5,980	6,033	6,001	6,089
Participation rate	76.0	75.2	76.3	75.0	74.8	74.4	75.0	74.5	75.4
Employed	5,236	5,375	5,463	5,170	5,305	5,328	5,279	5,311	5,404
Employment-population ratio[2]	66.1	66.7	67.7	65.3	66.1	66.3	65.6	65.9	66.9
Unemployed	780	688	696	769	692	652	754	690	686
Unemployment rate	13.0	11.3	11.3	12.9	11.5	10.9	12.5	11.5	11.3
Women, 20 years and over									
Civilian labor force	5,829	6,006	6,104	5,848	5,987	5,918	5,970	6,017	6,125
Participation rate	58.6	59.4	60.2	58.8	59.4	58.7	59.1	59.5	60.4
Employed	5,103	5,338	5,388	5,141	5,211	5,238	5,278	5,349	5,426
Employment-population ratio[2]	51.3	52.8	53.2	51.6	51.7	51.9	52.2	52.9	53.5
Unemployed	726	668	716	707	776	680	691	669	699
Unemployment rate	12.4	11.1	11.7	12.1	13.0	11.5	11.6	11.1	11.4
Both sexes, 16 to 19 years									
Civilian labor force	1,197	1,064	1,205	824	861	845	857	844	833
Participation rate	56.2	49.1	55.6	38.7	40.0	39.2	39.7	39.0	38.4
Employed	735	633	794	511	537	524	523	563	571
Employment-population ratio[2]	34.5	29.2	36.6	24.0	24.9	24.3	24.2	26.0	26.3
Unemployed	462	431	411	313	324	321	334	281	262
Unemployment rate	38.6	40.5	34.1	38.0	37.6	38.0	39.0	33.3	31.5
Men	39.9	36.4	33.9	40.5	36.5	39.3	40.3	31.5	31.5
Women	37.0	44.7	34.3	35.0	38.8	36.5	37.6	35.1	31.4
HISPANIC ORIGIN									
Civilian noninstitutional population	12,362	12,848	12,887	12,362	12,732	12,770	12,809	12,848	12,887
Civilian labor force	8,302	8,567	8,583	8,121	8,392	8,484	8,586	8,452	8,411
Participation rate	67.2	66.7	66.6	65.7	65.9	66.4	67.0	65.8	65.3
Employed	7,405	7,846	7,883	7,269	7,639	7,701	7,838	7,730	7,744
Employment-population ratio[2]	59.9	61.1	61.2	58.8	60.0	60.3	61.2	60.2	60.1
Unemployed	896	721	700	852	753	783	748	722	667
Unemployment rate	10.8	8.4	8.2	10.5	9.0	9.2	8.7	8.5	7.9

---

[1] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

[2] Civilian employment as a percent of the civilian noninstitutional population.

NOTE: Detail for the above race and Hispanic-origin groups will not sum to totals because data for the "other races" group are not presented and Hispanics are included in both the white and black population groups.

Table A-4. Selected employment indicators

(Numbers in thousands)

Category	Not seasonally adjusted			Seasonally adjusted					
	July 1986	June 1987	July 1987	July 1986	Mar. 1987	Apr. 1987	May 1987	June 1987	July 1987
CHARACTERISTIC									
Civilian employed, 16 years and over	111,832	113,498	114,652	109,887	111,368	111,835	112,447	112,257	112,727
Married men, spouse present	39,809	40,257	40,402	39,634	40,100	39,967	40,029	40,057	40,241
Married women, spouse present	26,780	27,974	27,744	27,474	27,965	28,213	28,495	28,458	28,426
Women who maintain families	5,846	5,987	6,031	5,812	5,933	5,972	5,921	5,939	6,013
MAJOR INDUSTRY AND CLASS OF WORKER									
Agriculture:									
Wage and salary workers	1,840	1,937	1,967	1,504	1,739	1,589	1,695	1,614	1,619
Self-employed workers	1,575	1,514	1,572	1,434	1,418	1,505	1,442	1,386	1,429
Unpaid family workers	240	211	215	171	150	175	170	165	154
Nonagricultural industries:									
Wage and salary workers	99,822	101,264	102,350	98,312	99,834	100,112	100,854	100,420	100,838
Government	15,981	16,515	16,355	16,582	16,568	16,484	16,710	16,956	16,931
Private industries	83,842	84,749	85,996	81,730	83,265	83,628	84,124	83,464	83,907
Private households	1,377	1,242	1,353	1,241	1,227	1,266	1,266	1,146	1,224
Other industries	82,465	83,507	84,643	80,489	82,038	82,362	82,858	82,318	82,683
Self-employed workers	8,097	8,286	8,279	8,019	8,050	8,117	8,142	8,328	8,205
Unpaid family workers	257	287	269	258	273	268	275	274	268
PERSONS AT WORK PART TIME[1]									
All industries:									
Part time for economic reasons	6,150	5,723	6,219	5,442	5,456	5,391	5,282	5,184	5,508
Slack work	2,417	2,234	2,387	2,473	2,440	2,322	2,223	2,317	2,456
Could only find part-time work	3,396	3,053	3,452	2,661	2,698	2,746	2,665	2,579	2,722
Voluntary part time	11,403	13,278	11,826	13,967	14,167	13,862	14,573	15,054	14,422
Nonagricultural industries:									
Part time for economic reasons	5,835	5,395	5,848	5,222	5,164	5,110	5,029	4,918	5,235
Slack work	2,239	2,075	2,203	2,317	2,218	2,137	2,071	2,155	2,295
Could only find part-time work	3,283	2,903	3,290	2,609	2,595	2,662	2,594	2,477	2,634
Voluntary part time	10,952	12,718	11,324	13,578	13,682	13,399	14,069	14,485	13,946

[1] Excludes persons "with a job but not at work" during the survey period for such reasons as vacation, illness, or industrial dispute.

Table A-5. Range of unemployment measures based on varying definitions of unemployment and the labor force, seasonally adjusted

(Percent)

	Measure	Quarterly averages					Monthly data		
		1986			1987		1987		
		II	III	IV	I	II	May	June	July
U-1	Persons unemployed 15 weeks or longer as a percent of the civilian labor force	1.9	1.9	1.8	1.8	1.7	1.8	1.7	1.6
U-2	Job losers as a percent of the civilian labor force	3.5	3.4	3.3	3.3	3.0	3.0	3.0	2.9
U-3	Unemployed persons 25 years and over as a percent of the civilian labor force	5.5	5.4	5.4	5.1	4.7	4.8	4.6	4.7
U-4	Unemployed full-time jobseekers as a percent of the full-time civilian labor force	6.8	6.6	6.5	6.3	5.9	5.9	5.9	5.7
U-5a	Total unemployed as a percent of the labor force, including the resident Armed Forces	7.0	6.8	6.8	6.6	6.1	6.2	6.0	5.9
U-5b	Total unemployed as a percent of the civilian labor force	7.1	6.9	6.9	6.7	6.2	6.3	6.1	6.0
U-6	Total full-time jobseekers plus ½ part-time jobseekers plus ½ total on part time for economic reasons as a percent of the civilian labor force less ½ of the part-time labor force	9.6	9.3	9.2	9.0	8.4	8.5	8.3	8.3
U-7	Total full-time jobseekers plus ½ part-time jobseekers plus ½ total on part time for economic reasons plus discouraged workers as a percent of the civilian labor force plus discouraged workers less ½ of the part-time labor force	10.5	10.2	10.2	10.0	9.3	N.A.	N.A.	N.A.

N.A. = not available

Table A-6. Selected unemployment indicators, seasonally adjusted

Category	Number of unemployed persons (in thousands)			Unemployment rates[1]					
	July 1986	June 1987	July 1987	July 1986	Mar. 1987	Apr. 1987	May 1987	June 1987	July 1987
CHARACTERISTIC									
Total, 16 years and over	8,230	7,260	7,224	7.0	6.6	6.3	6.3	6.1	6.0
Men, 16 years and over	4,566	4,085	3,941	7.0	6.6	6.3	6.4	6.2	6.0
Men, 20 years and over	3,811	3,437	3,323	6.2	5.8	5.5	5.5	5.5	5.4
Women, 16 years and over	3,664	3,175	3,283	7.0	6.6	6.2	6.1	5.9	6.1
Women, 20 years and over	3,010	2,588	2,683	6.2	5.8	5.5	5.4	5.2	5.4
Both sexes, 16 to 19 years	1,409	1,235	1,218	17.9	18.1	17.4	17.7	15.9	15.5
Married men, spouse present	1,838	1,678	1,608	4.4	4.1	4.1	3.9	4.0	3.8
Married women, spouse present	1,514	1,171	1,243	5.2	4.5	4.4	4.1	4.0	4.2
Women who maintain families	610	635	620	9.5	9.7	9.3	9.6	9.7	9.4
Full-time workers	6,684	5,998	5,837	6.6	6.2	5.9	5.9	5.9	5.7
Part-time workers	1,565	1,218	1,358	9.2	9.2	8.6	8.7	6.9	7.9
Labor force time lost[2]	--	--	--	7.8	7.4	7.3	7.2	7.1	6.9
INDUSTRY									
Nonagricultural private wage and salary workers	6,290	5,477	5,480	7.1	6.5	6.2	6.3	6.2	6.1
Mining	164	95	67	16.6	9.3	11.1	12.9	10.8	7.8
Construction	801	726	670	13.0	12.5	11.9	12.1	11.6	10.7
Manufacturing	1,522	1,201	1,307	6.9	6.9	6.2	6.4	5.6	6.0
Durable goods	883	682	789	6.7	6.7	6.2	6.3	5.3	6.1
Nondurable goods	639	519	518	7.2	7.3	6.2	6.6	6.0	5.9
Transportation and public utilities	335	307	280	5.5	4.6	4.8	4.4	5.0	4.4
Wholesale and retail trade	1,761	1,638	1,546	7.8	7.3	7.0	6.9	7.2	6.8
Finance and service industries	1,707	1,510	1,609	5.7	4.9	4.7	4.8	4.8	5.1
Government workers	572	601	600	3.3	3.4	3.6	3.3	3.4	3.4
Agricultural wage and salary workers	193	156	207	11.4	10.7	9.0	8.7	8.8	11.3

[1] Unemployment as a percent of the civilian labor force.

[2] Aggregate hours lost by the unemployed and persons on part time for economic reasons as a percent of potentially available labor force hours.

Table A-7. Duration of unemployment

(Numbers in thousands)

Weeks of unemployment	Not seasonally adjusted			Seasonally adjusted					
	July 1986	June 1987	July 1987	July 1986	Mar. 1987	Apr. 1987	May 1987	June 1987	July 1987
DURATION									
Less than 5 weeks	3,679	3,754	3,415	3,399	3,383	3,143	3,349	3,085	3,168
5 to 14 weeks	2,710	1,856	2,276	2,521	2,447	2,232	2,118	2,114	2,141
15 weeks and over	2,082	2,045	1,762	2,250	2,050	2,075	2,101	2,055	1,907
15 to 26 weeks	873	979	787	1,058	945	1,025	1,003	998	945
27 weeks and over	1,208	1,067	975	1,192	1,105	1,049	1,098	1,057	962
Average (mean) duration, in weeks	14.4	14.2	13.4	15.1	14.9	14.9	14.9	14.8	14.0
Median duration, in weeks	6.2	5.2	5.9	7.1	6.6	7.0	6.5	6.7	6.7
PERCENT DISTRIBUTION									
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than 5 weeks	43.4	49.0	45.8	41.6	42.9	42.2	44.3	42.5	43.9
5 to 14 weeks	32.0	24.2	30.5	30.9	31.1	30.0	28.0	29.1	29.7
15 weeks and over	24.6	26.7	23.6	27.5	26.0	27.9	27.8	28.3	26.4
15 to 26 weeks	10.3	12.8	10.6	12.9	12.0	13.8	13.2	13.8	13.1
27 weeks and over	14.3	13.9	13.1	14.6	14.0	14.1	14.5	14.6	13.3

Table A-8. Reason for unemployment

(Numbers in thousands)

Reason	Not seasonally adjusted			Seasonally adjusted					
	July 1986	June 1987	July 1987	July 1986	Mar. 1987	Apr. 1987	May 1987	June 1987	July 1987
NUMBER OF UNEMPLOYED									
Job losers	3,886	3,305	3,385	4,063	3,822	3,732	3,611	3,565	3,522
On layoff	997	776	839	1,078	1,011	958	906	901	918
Other job losers	2,889	2,529	2,546	2,985	2,811	2,774	2,705	2,664	2,604
Job leavers	1,089	896	1,068	1,025	1,000	923	906	949	1,007
Reentrants	2,205	2,162	1,911	2,205	2,111	1,940	2,018	1,969	1,913
New entrants	1,291	1,292	1,089	989	956	911	1,018	798	801
PERCENT DISTRIBUTION									
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Job losers	45.9	43.1	45.5	49.1	48.4	49.7	47.8	49.0	48.6
On layoff	11.8	10.1	11.3	13.0	12.8	12.8	12.0	12.4	12.7
Other job losers	34.1	33.0	34.2	36.0	35.6	37.0	35.8	36.6	36.0
Job leavers	12.9	11.7	14.3	12.4	12.7	12.3	12.0	13.0	13.9
Reentrants	26.0	28.2	25.6	26.6	26.8	25.8	26.7	27.0	26.4
New entrants	15.2	16.9	14.6	11.9	12.1	12.1	13.5	11.0	11.1
UNEMPLOYED AS A PERCENT OF THE CIVILIAN LABOR FORCE									
Job losers	3.2	2.7	2.8	3.4	3.2	3.1	3.0	3.0	2.9
Job leavers	.9	.7	.9	.9	.8	.8	.8	.8	.8
Reentrants	1.8	1.8	1.6	1.9	1.8	1.6	1.7	1.6	1.6
New entrants	1.1	1.1	.9	.8	.8	.8	.8	.7	.7

Table A-9. Unemployed persons by sex and age, seasonally adjusted

Sex and age	Number of unemployed persons (in thousands)			Unemployment rates[1]					
	July 1986	June 1987	July 1987	July 1986	Mar. 1987	Apr. 1987	May 1987	June 1987	July 1987
Total, 16 years and over	8,230	7,260	7,224	7.0	6.6	6.3	6.3	6.1	6.0
16 to 24 years	3,071	2,768	2,686	13.2	12.9	12.6	12.6	12.2	11.7
16 to 19 years	1,409	1,235	1,218	17.9	18.1	17.4	17.7	15.9	15.5
16 to 17 years	642	617	573	19.8	20.0	19.2	21.4	18.8	17.1
18 to 19 years	740	609	623	16.2	16.5	16.3	15.0	13.7	13.9
20 to 24 years	1,662	1,533	1,468	10.8	10.2	10.1	9.8	10.2	9.8
25 years and over	5,148	4,454	4,532	5.4	5.1	4.8	4.8	4.6	4.7
25 to 54 years	4,584	4,013	4,090	5.7	5.4	5.0	5.0	4.9	5.0
55 years and over	574	474	457	3.8	3.4	3.4	3.7	3.2	3.1
Men, 16 years and over	4,566	4,085	3,941	7.0	6.6	6.3	6.4	6.2	6.0
16 to 24 years	1,660	1,485	1,406	13.6	13.2	13.2	13.4	12.6	11.9
16 to 19 years	755	648	618	18.4	19.3	19.2	20.0	16.4	15.5
16 to 17 years	345	312	285	20.3	20.2	21.5	23.2	18.7	16.6
18 to 19 years	395	324	307	16.7	18.6	17.5	17.7	14.4	13.8
20 to 24 years	905	837	788	11.1	10.1	10.1	10.0	10.7	10.0
25 years and over	2,896	2,563	2,530	5.4	5.1	4.8	4.9	4.7	4.7
25 to 54 years	2,548	2,285	2,244	5.7	5.4	5.0	5.1	5.0	4.9
55 years and over	350	305	299	4.0	3.6	3.7	4.1	3.4	3.4
Women, 16 years and over	3,664	3,175	3,283	7.0	6.6	6.2	6.1	5.9	6.1
16 to 24 years	1,411	1,284	1,280	12.7	12.5	12.0	11.7	11.7	11.6
16 to 19 years	654	587	600	17.3	16.7	15.6	15.4	15.4	15.4
16 to 17 years	297	305	288	19.2	19.7	16.7	19.6	18.9	17.7
18 to 19 years	345	285	316	15.6	14.2	15.1	12.4	13.0	14.0
20 to 24 years	757	697	680	10.4	10.3	10.1	9.7	9.7	9.5
25 years and over	2,252	1,891	2,002	5.4	5.0	4.7	4.7	4.4	4.7
25 to 54 years	2,036	1,729	1,846	5.8	5.4	5.0	4.9	4.7	5.0
55 years and over	224	170	158	3.6	3.2	3.0	3.0	2.8	2.6

[1] Unemployment as a percent of the civilian labor force.

Table A-10. Employment status of black and other workers

(Numbers in thousands)

Employment status	Not seasonally adjusted			Seasonally adjusted[1]					
	July 1986	June 1987	July 1987	July 1986	Mar. 1987	Apr. 1987	May 1987	June 1987	July 1987
Civilian noninstitutional population	25,180	25,773	25,826	25,180	25,618	25,667	25,723	25,773	25,826
Civilian labor force	16,513	16,744	17,118	16,014	16,455	16,394	16,464	16,439	16,632
Participation rate	65.6	65.0	66.3	63.6	64.2	63.9	64.0	63.8	64.4
Employed	14,272	14,702	15,043	13,974	14,391	14,468	14,454	14,566	14,750
Employment-population ratio[2]	56.7	57.0	58.2	55.5	56.2	56.4	56.2	56.5	57.1
Unemployed	2,240	2,041	2,076	2,040	2,064	1,925	2,011	1,873	1,882
Unemployment rate	13.6	12.2	12.1	12.7	12.5	11.7	12.2	11.4	11.3
Not in labor force	8,667	9,029	8,708	9,166	9,163	9,273	9,259	9,334	9,194

[1] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

[2] Civilian employment as a percent of the civilian noninstitutional population.

Table A-11. Occupational status of the employed and unemployed, not seasonally adjusted

(Numbers in thousands)

Occupation	Civilian employed		Unemployed		Unemployment rate	
	July 1986	July 1987	July 1986	July 1987	July 1986	July 1987
Total, 16 years and over[1]	111,832	114,652	8,471	7,453	7.0	6.1
Managerial and professional specialty	26,032	27,692	746	698	2.8	2.5
Executive, administrative, and managerial	12,609	13,696	354	310	2.7	2.2
Professional specialty	13,423	13,997	392	388	2.8	2.7
Technical, sales, and administrative support	34,893	35,308	1,793	1,589	4.9	4.3
Technicians and related support	3,548	3,525	129	67	3.5	1.9
Sales occupations	13,535	13,602	759	681	5.3	4.8
Administrative support, including clerical	17,809	18,181	905	840	4.8	4.4
Service occupations	14,980	15,330	1,367	1,250	8.4	7.5
Private household	1,041	1,004	78	62	7.0	5.8
Protective service	1,942	1,972	60	85	3.0	4.2
Service, except private household and protective	11,998	12,354	1,229	1,103	9.3	8.2
Precision production, craft, and repair	13,843	13,892	988	788	6.7	5.4
Mechanics and repairers	4,506	4,478	226	208	4.8	4.4
Construction trades	5,162	5,251	472	387	8.4	6.9
Other precision production, craft, and repair	4,175	4,163	290	194	6.5	4.5
Operators, fabricators, and laborers	17,904	18,102	1,979	1,760	10.0	8.9
Machine operators, assemblers, and inspectors	8,197	8,289	901	774	9.9	8.5
Transportation and material moving occupations	4,708	4,766	424	335	8.3	6.6
Handlers, equipment cleaners, helpers, and laborers	4,999	5,047	654	651	11.6	11.4
Construction laborers	946	867	157	161	14.3	15.7
Other handlers, equipment cleaners, helpers, and laborers	4,052	4,180	497	490	10.9	10.5
Farming, forestry, and fishing	4,181	4,328	242	258	5.5	5.6

[1] Persons with no previous work experience and those whose last job was in the Armed Forces are included in the unemployed total.

Table A-12. Employment status of male Vietnam-era veterans and nonveterans by age, not seasonally adjusted

(Numbers in thousands)

Veteran status and age	Civilian noninstitutional population		Civilian labor force							
			Total		Employed		Unemployed			
							Number		Percent of labor force	
	July 1986	July 1987	July 1986	July 1987	July 1986	July 1987	July 1986	July 1987	July 1986	July 1987
VIETNAM-ERA VETERANS										
Total, 30 years and over	7,751	7,843	7,222	7,260	6,868	6,877	354	383	4.9	5.3
30 to 44 years	6,380	6,210	6,120	5,956	5,801	5,623	319	333	5.2	5.6
30 to 34 years	1,137	915	1,085	871	990	786	95	85	8.8	9.8
35 to 39 years	3,048	2,589	2,923	2,484	2,778	2,348	145	136	5.0	5.5
40 to 44 years	2,195	2,706	2,112	2,601	2,033	2,489	79	112	3.7	4.3
45 years and over	1,371	1,633	1,182	1,304	1,067	1,254	35	50	3.2	3.8
NONVETERANS										
Total, 30 to 44 years	18,446	19,510	17,455	18,474	16,531	17,665	924	809	5.3	4.4
30 to 34 years	8,576	8,869	8,161	8,494	7,701	8,103	460	391	5.6	4.6
35 to 39 years	5,736	6,231	5,418	5,882	5,138	5,643	280	239	5.2	4.1
40 to 44 years	4,134	4,410	3,876	4,098	3,692	3,919	184	179	4.7	4.4

NOTE: Male Vietnam-era veterans are men who served in the Armed Forces between August 5, 1964 and May 7, 1975. Nonveterans are men who have never served in the Armed Forces; published data are limited to those 30 to 44 years of age, the group that most closely corresponds to the bulk of the Vietnam-era veteran population.

Table A-13. Employment status of the civilian population for eleven large States

(Numbers in thousands)

State and employment status	Not seasonally adjusted[1]			Seasonally adjusted[2]					
	July 1986	June 1987	July 1987	July 1986	Mar. 1987	Apr. 1987	May 1987	June 1987	July 1987
California									
Civilian noninstitutional population	20,136	20,553	20,592	20,136	20,440	20,477	20,516	20,553	20,592
Civilian labor force	13,579	13,830	13,981	13,425	13,655	13,761	13,917	13,742	13,819
Employed	12,556	13,079	13,142	12,484	12,833	12,959	13,070	12,989	13,064
Unemployed	1,024	751	839	941	822	802	847	753	755
Unemployment rate	7.5	5.4	6.0	7.0	6.0	5.8	6.1	5.5	5.5
Florida									
Civilian noninstitutional population	9,183	9,419	9,441	9,183	9,355	9,376	9,398	9,419	9,441
Civilian labor force	5,734	5,883	5,985	5,641	5,853	5,837	5,881	5,840	5,899
Employed	5,341	5,570	5,630	5,289	5,524	5,515	5,562	5,546	5,587
Unemployed	393	313	356	352	329	322	319	294	312
Unemployment rate	6.9	5.3	5.9	6.2	5.6	5.5	5.4	5.0	5.3
Illinois									
Civilian noninstitutional population	8,661	8,684	8,687	8,661	8,678	8,680	8,682	8,684	8,687
Civilian labor force	5,798	5,818	5,874	5,710	5,620	5,652	5,680	5,727	5,778
Employed	5,347	5,366	5,455	5,258	5,186	5,186	5,201	5,297	5,356
Unemployed	451	452	419	452	434	466	479	430	422
Unemployment rate	7.8	7.8	7.1	7.9	7.7	8.2	8.4	7.5	7.3
Massachusetts									
Civilian noninstitutional population	4,554	4,571	4,573	4,554	4,567	4,568	4,570	4,571	4,573
Civilian labor force	3,121	3,137	3,132	3,062	3,074	3,070	3,069	3,114	3,069
Employed	3,001	3,040	3,052	2,946	2,953	2,947	2,954	3,015	2,993
Unemployed	119	97	80	116	121	123	115	99	76
Unemployment rate	3.8	3.1	2.6	3.8	3.9	4.0	3.7	3.2	2.5
Michigan									
Civilian noninstitutional population	6,864	6,925	6,931	6,864	6,909	6,914	6,920	6,925	6,931
Civilian labor force	4,475	4,575	4,599	4,374	4,500	4,466	4,486	4,513	4,503
Employed	4,064	4,166	4,192	3,990	4,138	4,081	4,124	4,124	4,129
Unemployed	412	408	407	384	362	385	362	389	374
Unemployment rate	9.2	8.9	8.8	8.8	8.0	8.6	8.1	8.6	8.3
New Jersey									
Civilian noninstitutional population	5,926	5,981	5,987	5,926	5,966	5,971	5,977	5,981	5,987
Civilian labor force	3,999	4,029	4,025	3,904	3,965	3,946	4,003	3,977	3,930
Employed	3,772	3,862	3,843	3,698	3,819	3,791	3,836	3,809	3,771
Unemployed	226	167	181	206	146	155	167	168	159
Unemployment rate	5.7	4.1	4.5	5.3	3.7	3.9	4.2	4.2	4.0
New York									
Civilian noninstitutional population	13,736	13,777	13,782	13,736	13,766	13,769	13,774	13,777	13,782
Civilian labor force	8,597	8,554	8,674	8,399	8,511	8,473	8,491	8,535	8,481
Employed	8,056	8,162	8,280	7,881	8,108	8,062	8,082	8,145	8,106
Unemployed	541	392	394	518	403	411	409	390	375
Unemployment rate	6.3	4.6	4.5	6.2	4.7	4.9	4.8	4.6	4.4
North Carolina									
Civilian noninstitutional population	4,761	4,836	4,843	4,761	4,816	4,822	4,829	4,836	4,843
Civilian labor force	3,276	3,316	3,389	3,213	3,264	3,267	3,240	3,292	3,322
Employed	3,108	3,155	3,229	3,055	3,107	3,112	3,101	3,143	3,171
Unemployed	168	162	160	158	157	155	139	149	151
Unemployment rate	5.1	4.9	4.7	4.9	4.8	4.7	4.3	4.5	4.5
Ohio									
Civilian noninstitutional population	8,108	8,133	8,136	8,108	8,127	8,128	8,131	8,133	8,136
Civilian labor force	5,295	5,293	5,325	5,204	5,215	5,223	5,294	5,237	5,240
Employed	4,882	4,909	4,967	4,777	4,824	4,846	4,878	4,859	4,868
Unemployed	413	384	358	427	391	377	416	378	372
Unemployment rate	7.8	7.3	6.7	8.2	7.5	7.2	7.9	7.2	7.1
Pennsylvania									
Civilian noninstitutional population	9,242	9,279	9,283	9,242	9 269	9,272	9,276	9,279	9,283
Civilian labor force	5,787	5,713	5,787	5,615	5,530	5,545	5,621	5,630	5,616
Employed	5,397	5,359	5,453	5,241	5,204	5,238	5,319	5,310	5,295
Unemployed	389	354	335	374	326	307	302	320	321
Unemployment rate	6.7	6.2	5.8	6.7	5.9	5.5	5.4	5.7	5.7
Texas									
Civilian noninstitutional population	12,000	12,211	12,231	12,000	12,154	12,172	12,192	12,211	12,231
Civilian labor force	8,338	8,483	8,636	8,155	8,134	8,267	8,511	8,372	8,456
Employed	7,559	7,667	7,882	7,434	7,494	7,552	7,778	7,656	7,753
Unemployed	779	816	754	721	640	715	733	716	703
Unemployment rate	9.3	9.6	8.7	8.8	7.9	8.6	8.6	8.6	8.3

[1] These are the official Bureau of Labor Statistics' estimates used in the administration of Federal fund allocation programs.

[2] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and the seasonally adjusted columns.

Table B-1. Employees on nonagricultural payrolls by industry

(In thousands)

Industry	Not seasonally adjusted				Seasonally adjusted					
	July 1986	May 1987	June 1987p	July 1987p	July 1986	Mar. 1987	Apr. 1987	May 1987	June 1987p	July 1987p
Total	99,440	102,140	102,696	101,932	99,601	101,329	101,598	101,708	101,811	102,115
Total private	83,629	84,778	85,591	85,655	82,991	84,352	84,560	84,677	84,769	85,008
Goods-producing	24,864	24,760	25,102	25,079	24,628	24,749	24,759	24,752	24,775	24,849
Mining	770	731	740	747	764	722	729	735	737	742
Oil and gas extraction	437.9	412.1	420.0	428.7	439	408	416	420	425	430
Construction	5,227	5,046	5,210	5,315	4,924	5,032	5,019	4,999	5,010	5,009
General building contractors	1,368.6	1,268.0	1,311.9	1,342.5	1,290	1,291	1,272	1,267	1,266	1,267
Manufacturing	18,867	18,985	19,152	19,017	18,940	18,995	19,011	19,018	19,028	19,098
Production workers	12,742	12,927	13,063	12,925	12,843	12,925	12,939	12,946	12,967	13,028
Durable goods	11,153	11,184	11,257	11,140	11,199	11,176	11,175	11,175	11,179	11,194
Production workers	7,319	7,425	7,483	7,363	7,386	7,399	7,406	7,409	7,423	7,432
Lumber and wood products	722.5	737.5	754.1	762.5	704	734	736	738	736	743
Furniture and fixtures	484.5	506.4	509.1	505.2	497	502	504	509	510	519
Stone, clay, and glass products	595.2	589.0	595.7	592.6	584	586	586	584	582	582
Primary metal industries	739.6	748.0	753.8	740.4	745	739	743	742	746	748
Blast furnaces and basic steel products	279.4	274.8	277.8	276.1	278	266	272	272	275	275
Fabricated metal products	1,407.4	1,420.2	1,429.8	1,410.1	1,423	1,419	1,423	1,420	1,423	1,426
Machinery, except electrical	2,047.7	2,026.9	2,038.3	2,028.4	2,056	2,015	2,022	2,025	2,030	2,037
Electrical and electronic equipment	2,117.8	2,083.2	2,088.8	2,078.5	2,124	2,099	2,092	2,087	2,080	2,087
Transportation equipment	1,985.7	2,014.6	2,020.5	1,966.7	2,004	2,022	2,011	2,011	2,012	1,987
Motor vehicles and equipment	838.0	846.0	851.8	794.9	848	854	847	843	843	805
Instruments and related products	703.1	691.9	696.1	695.0	703	694	694	693	693	695
Miscellaneous manufacturing	350.4	366.6	370.4	360.7	359	366	364	366	367	370
Nondurable goods	7,714	7,801	7,895	7,877	7,741	7,819	7,836	7,843	7,849	7,904
Production workers	5,423	5,502	5,580	5,562	5,457	5,526	5,533	5,537	5,544	5,596
Food and kindred products	1,655.4	1,593.6	1,638.0	1,683.1	1,619	1,635	1,642	1,633	1,633	1,645
Tobacco manufactures	55.4	53.4	53.7	53.9	59	57	56	57	57	58
Textile mill products	693.0	726.8	733.3	723.2	706	725	724	727	730	736
Apparel and other textile products	1,065.9	1,110.6	1,120.1	1,088.3	1,103	1,103	1,104	1,107	1,108	1,127
Paper and allied products	674.3	675.0	683.5	678.0	673	678	677	677	676	677
Printing and publishing	1,454.2	1,495.7	1,499.6	1,499.0	1,459	1,485	1,493	1,497	1,498	1,506
Chemicals and allied products	1,027.9	1,019.5	1,033.1	1,031.6	1,022	1,017	1,018	1,022	1,025	1,025
Petroleum and coal products	172.1	165.3	167.3	167.8	168	164	164	164	164	164
Rubber and miscellaneous plastics products	774.7	810.9	815.8	806.4	783	807	809	809	809	815
Leather and leather products	141.4	150.1	151.0	145.4	149	148	149	150	149	153
Service-producing	74,576	77,380	77,594	76,853	74,973	76,580	76,839	76,956	77,036	77,266
Transportation and public utilities	5,243	5,349	5,392	5,351	5,237	5,333	5,348	5,344	5,351	5,344
Transportation	3,016	3,129	3,157	3,113	3,029	3,112	3,124	3,120	3,129	3,126
Communication and public utilities	2,227	2,220	2,235	2,238	2,208	2,221	2,224	2,224	2,222	2,218
Wholesale trade	5,764	5,768	5,809	5,819	5,735	5,766	5,772	5,775	5,780	5,790
Durable goods	3,400	3,401	3,422	3,429	3,385	3,397	3,397	3,401	3,405	3,412
Nondurable goods	2,364	2,367	2,387	2,390	2,350	2,369	2,375	2,374	2,375	2,378
Retail trade	17,947	18,205	18,363	18,351	17,866	18,136	18,197	18,205	18,217	18,278
General merchandise stores	2,313.2	2,318.0	2,333.7	2,350.8	2,367	2,380	2,385	2,390	2,396	2,406
Food stores	2,887.4	2,941.6	2,962.5	2,973.7	2,882	2,944	2,953	2,956	2,960	2,968
Automotive dealers and service stations	1,966.5	1,983.8	2,003.0	2,006.2	1,943	1,979	1,978	1,978	1,981	1,982
Eating and drinking places	6,051.5	6,089.5	6,178.8	6,153.5	5,887	5,964	5,962	5,976	5,981	5,986
Finance, insurance, and real estate	6,409	6,575	6,658	6,705	6,323	6,526	6,558	6,576	6,595	6,614
Finance	3,198	3,269	3,310	3,327	3,167	3,256	3,272	3,276	3,287	3,294
Insurance	1,963	2,035	2,045	2,056	1,952	2,022	2,032	2,037	2,039	2,044
Real estate	1,248	1,271	1,303	1,322	1,204	1,248	1,254	1,263	1,269	1,276
Services	23,402	24,121	24,267	24,350	23,202	23,842	23,926	24,025	24,051	24,133
Business services	4,831.2	5,067.6	5,105.3	5,137.2	4,798	5,020	5,044	5,083	5,085	5,101
Health services	6,597.8	6,815.4	6,878.5	6,918.7	6,563	6,773	6,800	6,822	6,851	6,884
Government	15,811	17,362	17,105	16,277	16,610	16,977	17,038	17,031	17,042	17,107
Federal	2,918	2,947	2,979	2,984	2,872	2,922	2,933	2,935	2,938	2,937
State	3,673	4,002	3,825	3,738	3,881	3,930	3,943	3,947	3,935	3,951
Local	9,220	10,413	10,301	9,555	9,857	10,125	10,162	10,149	10,169	10,219

p = preliminary

Table B-2. Average weekly hours of production or nonsupervisory workers[1] on private nonagricultural payrolls by industry

Industry	Not seasonally adjusted				Seasonally adjusted					
	July 1986	May 1987	June 1987 p	July 1987 p	July 1986	Mar. 1987	Apr. 1987	May 1987	June 1987 p	July 1987 p
Total private	34.9	34.8	35.0	35.0	34.7	34.8	34.7	34.9	34.8	34.7
Mining	41.4	42.4	42.4	42.7	(2)	(2)	(2)	(2)	(2)	(2)
Construction	38.2	38.5	38.1	38.5	(2)	(2)	(2)	(2)	(2)	(2)
Manufacturing	40.2	40.9	41.1	40.6	40.6	40.9	40.6	41.0	41.0	41.0
Overtime hours	3.3	3.6	3.7	3.6	3.5	3.6	3.5	3.8	3.7	3.8
Durable goods	40.6	41.5	41.7	41.0	41.2	41.5	41.2	41.6	41.5	41.6
Overtime hours	3.3	3.7	3.8	3.6	3.5	3.7	3.6	3.9	3.8	3.8
Lumber and wood products	40.2	41.3	41.2	40.2	40.4	40.9	40.6	41.0	40.5	40.4
Furniture and fixtures	39.0	39.5	40.0	39.3	39.7	40.0	39.1	39.9	40.0	40.1
Stone, clay, and glass products	42.4	42.8	42.6	42.6	42.1	42.5	41.9	42.3	42.1	42.3
Primary metal industries	41.0	43.0	43.2	42.9	41.4	42.6	42.3	43.1	43.1	43.3
Blast furnaces and basic steel products	41.4	43.4	43.8	43.7	41.5	42.3	42.4	43.3	43.5	43.8
Fabricated metal products	40.5	41.4	41.7	40.9	41.1	41.5	41.2	41.6	41.5	41.5
Machinery, except electrical	40.7	42.0	42.3	41.7	41.3	42.0	41.8	42.2	42.2	42.4
Electrical and electronic equipment	40.4	40.6	41.1	40.4	41.1	40.9	40.6	40.8	41.1	41.1
Transportation equipment	41.5	42.2	41.9	41.1	42.2	42.3	41.9	42.2	41.9	41.8
Motor vehicles and equipment	41.7	42.6	42.1	41.2	42.5	42.9	42.1	42.5	42.0	42.0
Instruments and related products	40.1	41.2	41.6	40.9	40.7	41.3	41.0	41.5	41.6	41.6
Miscellaneous manufacturing	38.8	39.2	39.4	38.8	(2)	(2)	(2)	(2)	(2)	(2)
Nondurable goods	39.5	40.1	40.3	40.0	39.8	40.1	39.7	40.2	40.3	40.2
Overtime hours	3.3	3.5	3.6	3.6	3.4	3.5	3.3	3.7	3.6	3.7
Food and kindred products	39.9	40.1	40.2	39.9	39.9	40.0	39.8	40.1	40.2	39.9
Tobacco manufactures	36.4	39.3	40.1	35.5	(2)	(2)	(2)	(2)	(2)	(2)
Textile mill products	40.2	41.9	42.3	41.9	41.0	42.1	41.4	42.0	42.0	42.8
Apparel and other textile products	36.3	37.2	37.5	36.9	36.6	37.0	36.1	37.2	37.2	37.2
Paper and allied products	42.9	43.3	43.3	42.9	43.2	43.0	43.0	43.5	43.3	43.2
Printing and publishing	37.7	37.7	37.7	37.7	38.0	37.9	37.7	37.9	38.1	38.0
Chemicals and allied products	41.6	42.1	42.1	42.1	41.8	42.0	42.2	42.1	42.0	42.4
Petroleum and coal products	43.9	43.9	43.6	44.3	43.7	44.1	43.9	44.3	43.6	44.1
Rubber and miscellaneous plastics products	40.4	41.5	41.8	40.9	(2)	(2)	(2)	(2)	(2)	(2)
Leather and leather products	37.0	38.6	39.5	38.5	(2)	(2)	(2)	(2)	(2)	(2)
Transportation and public utilities	39.4	39.0	39.3	39.3	39.2	39.0	39.0	39.2	39.0	39.1
Wholesale trade	38.5	38.3	38.4	38.2	38.3	38.1	38.2	38.3	38.2	38.0
Retail trade	29.9	29.3	29.6	30.0	29.2	29.3	29.5	29.4	29.2	29.3
Finance, insurance, and real estate	36.3	36.3	36.4	36.0	(2)	(2)	(2)	(2)	(2)	(2)
Services	32.8	32.4	32.6	32.7	32.5	32.5	32.4	32.5	32.5	32.4

---

[1] Data relate to production workers in mining and manufacturing; to construction workers in construction; and to nonsupervisory workers in transportation and public utilities; wholesale and retail trade; finance, insurance, and real estate; and services. These groups account for approximately four-fifths of the total employees on private nonagricultural payrolls.

[2] This series is not published seasonally adjusted since the seasonal component is small relative to the trend-cycle and/or irregular components and consequently cannot be separated with sufficient precision.

p = preliminary.

Table B-3. Average hourly and weekly earnings of production or nonsupervisory workers[1] on private nonagricultural payrolls by industry

Industry	Average hourly earnings				Average weekly earnings			
	July 1986	May 1987	June 1987 p	July 1987 p	July 1986	May 1987	June 1987 p	July 1987 p
Total private	$8.70	$8.93	$8.92	$8.91	$303.63	$310.76	$312.20	$311.85
Seasonally adjusted	8.74	8.95	8.94	8.96	303.28	312.36	311.11	310.91
Mining	12.49	12.42	12.44	12.34	517.09	526.61	527.46	526.92
Construction	12.34	12.60	12.62	12.59	471.39	485.10	480.82	484.72
Manufacturing	9.74	9.87	9.88	9.88	391.55	403.68	406.07	401.13
Durable goods	10.26	10.40	10.43	10.41	416.56	431.60	434.93	426.81
Lumber and wood products	8.29	8.37	8.44	8.49	333.26	345.68	347.73	341.30
Furniture and fixtures	7.45	7.64	7.66	7.70	290.55	301.78	306.40	302.61
Stone, clay, and glass products	10.06	10.26	10.27	10.27	426.54	439.13	437.50	437.50
Primary metal industries	11.93	11.96	11.97	12.03	489.13	514.28	517.10	516.09
Blast furnaces and basic steel products	13.83	13.80	13.81	13.82	572.56	598.92	604.88	603.93
Fabricated metal products	9.86	9.97	10.01	9.99	399.33	412.76	417.42	408.59
Machinery, except electrical	10.59	10.70	10.77	10.79	431.01	449.40	455.57	449.94
Electrical and electronic equipment	9.67	9.83	9.84	9.87	390.67	399.10	404.42	398.75
Transportation equipment	12.73	12.85	12.91	12.82	528.30	542.27	540.93	526.90
Motor vehicles and equipment	13.33	13.42	13.50	13.33	555.86	571.69	568.35	549.20
Instruments and related products	9.48	9.69	9.69	9.70	380.15	399.23	403.10	396.73
Miscellaneous manufacturing	7.57	7.72	7.73	7.75	293.72	302.62	314.56	300.70
Nondurable goods	9.00	9.13	9.12	9.16	355.50	366.11	367.54	366.40
Food and kindred products	8.76	8.96	8.90	8.86	349.52	359.30	357.78	353.51
Tobacco manufactures	13.73	14.53	15.52	14.75	499.77	571.03	622.35	523.63
Textile mill products	6.88	7.13	7.15	7.17	276.58	298.75	302.45	300.42
Apparel and other textile products	5.79	5.89	5.93	5.88	210.18	219.11	222.38	216.97
Paper and allied products	11.33	11.40	11.42	11.51	486.06	493.62	494.49	493.78
Printing and publishing	9.98	10.19	10.16	10.22	376.25	384.16	383.03	385.29
Chemicals and allied products	12.05	12.31	12.27	12.35	501.28	518.25	516.57	519.94
Petroleum and coal products	14.16	14.52	14.41	14.53	621.62	637.43	628.28	643.68
Rubber and miscellaneous plastics products	8.78	8.84	8.86	8.95	354.71	366.86	370.35	366.06
Leather and leather products	5.92	6.05	6.04	5.98	219.04	233.53	238.58	230.23
Transportation and public utilities	11.67	11.95	11.95	11.99	459.80	466.05	469.64	471.21
Wholesale trade	9.30	9.57	9.56	9.57	358.05	366.53	367.10	365.57
Retail trade	5.98	6.09	6.07	6.07	178.80	178.44	179.67	182.10
Finance, insurance, and real estate	8.30	8.72	8.65	8.63	301.29	316.54	314.86	310.68
Services	8.04	8.38	8.35	8.34	263.71	271.51	272.21	272.72

[1] See footnote 1, table B-2.

p = preliminary.

Table B-4. Hourly Earnings Index for production or nonsupervisory workers[1] on private nonagricultural payrolls by industry

(1977 = 100)

Industry	Not seasonally adjusted					Seasonally adjusted						
	July 1986	May 1987	June 1987p	July 1987p	Percent change from: July 1986-July 1987	July 1986	Mar. 1987	Apr. 1987	May 1987	June 1987p	July 1987p	Percent change from: June 1987-July 1987
Total private nonfarm:												
Current dollars	168.6	172.7	172.6	172.7	2.4	169.1	172.2	172.6	172.9	172.9	173.2	0.2
Constant (1977) dollars	94.8	94.0	93.6	N.A.	(2)	95.1	94.4	94.2	94.0	93.8	N.A.	(3)
Mining	182.4	181.6	182.1	181.8	-.3	(4)	(4)	(4)	(4)	(4)	(4)	(4)
Construction	150.9	154.0	154.2	153.9	2.0	151.5	153.8	153.7	154.1	155.1	154.7	-.3
Manufacturing	172.6	174.5	174.7	175.1	1.5	172.4	174.3	175.0	174.4	174.8	174.9	.1
Transportation and public utilities	170.0	175.2	175.1	175.2	3.0	171.0	174.6	175.2	176.2	175.9	176.2	.2
Wholesale trade	171.6	176.7	176.3	176.5	2.9	(4)	(4)	(4)	(4)	(4)	(4)	(4)
Retail trade	157.5	160.5	160.2	160.2	1.7	158.1	159.0	159.8	160.2	160.2	160.9	.4
Finance, insurance, and real estate	178.7	187.1	186.1	186.0	4.1	(4)	(4)	(4)	(4)	(4)	(4)	(4)
Services	172.6	179.5	179.1	179.0	3.7	174.0	179.0	179.4	179.9	179.8	180.5	.4

(1) See footnote 1, table B-2.
(2) Percent change is -1.4 percent from June 1986 to June 1987, the latest month available.
(3) Percent change is -0.3 percent from May 1987 to June 1987, the latest month available.
(4) These series are not seasonally adjusted since the seasonal component is small relative to the trend-cycle and/or irregular components and consequently cannot be separated with sufficient precision.
N.A. Data not available.
p = preliminary.

Table B-5. Indexes of aggregate weekly hours of production or nonsupervisory workers[1] on private nonagricultural payrolls by industry

(1977 = 100)

Industry	Not seasonally adjusted				Seasonally adjusted					
	July 1986	May 1987	June 1987 p	July 1987 p	July 1986	Mar. 1987	Apr. 1987	May 1987	June 1987 p	July 1987 p
Total	119.1	120.1	122.1	122.1	117.3	119.6	119.6	120.2	120.0	120.3
Goods-producing	97.9	99.4	101.1	100.1	97.2	98.9	98.0	99.2	99.0	99.5
Mining	82.8	82.2	83.5	84.6	83.6	80.0	81.3	83.4	83.2	85.6
Construction	143.5	137.5	141.2	145.9	130.5	135.5	132.8	134.3	132.7	133.1
Manufacturing	89.8	92.8	94.1	91.9	91.4	92.8	92.1	93.1	93.2	93.7
Durable goods	87.3	90.5	91.6	88.6	89.3	90.2	89.6	90.5	90.5	90.7
Lumber and wood products	99.6	103.9	106.0	104.9	97.1	102.5	102.0	103.2	101.5	102.4
Furniture and fixtures	100.5	107.2	109.0	106.4	105.7	107.9	105.7	109.0	109.2	111.9
Stone, clay, and glass products	88.5	88.9	89.7	89.0	86.1	87.5	86.3	86.9	86.3	86.3
Primary metal industries	59.4	63.5	64.4	62.4	60.8	61.9	62.1	63.1	63.5	63.9
Blast furnaces and basic steel products	50.7	51.4	52.3	51.6	50.7	47.7	49.6	50.7	51.4	51.5
Fabricated metal products	85.3	88.6	90.2	87.1	87.7	88.9	88.4	89.0	89.1	89.5
Machinery, except electrical	83.6	85.7	87.0	85.2	85.6	84.7	84.8	86.0	86.5	87.5
Electrical and electronic equipment	98.2	98.8	100.1	97.7	101.2	99.9	99.0	99.4	100.0	100.8
Transportation equipment	92.5	97.9	97.3	90.7	96.0	98.2	96.6	97.3	96.8	94.1
Motor vehicles and equipment	82.1	87.2	86.9	77.3	85.3	88.0	85.6	86.1	85.5	80.6
Instruments and related products	99.4	101.5	103.4	100.9	101.3	101.7	101.0	102.0	102.5	103.0
Miscellaneous manufacturing	75.8	80.5	82.3	78.2	79.7	81.1	79.9	81.0	81.6	82.2
Nondurable goods	93.3	96.2	98.0	96.8	94.6	96.5	95.7	97.0	97.2	98.1
Food and kindred products	100.6	96.1	99.6	102.9	97.7	99.4	99.3	99.6	99.5	100.0
Tobacco manufactures	68.8	72.4	72.9	64.6	78.6	77.7	77.3	80.1	76.3	73.1
Textile mill products	75.1	82.7	84.3	82.4	78.2	82.9	81.3	82.9	83.3	85.9
Apparel and other textile products	80.8	86.2	87.9	83.8	84.6	85.3	83.5	85.8	86.1	87.7
Paper and allied products	98.5	99.7	101.1	99.7	99.2	99.7	99.5	100.5	100.0	100.1
Printing and publishing	126.1	129.6	129.9	129.3	128.0	129.4	128.7	130.0	131.1	131.1
Chemicals and allied products	92.5	93.6	95.2	94.6	92.5	93.1	93.4	93.7	93.9	94.8
Petroleum and coal products	85.0	84.8	85.7	87.7	82.6	83.3	82.9	84.5	83.9	84.9
Rubber and miscellaneous plastics products	105.7	114.2	115.6	111.5	108.9	113.5	112.6	114.5	114.8	114.7
Leather and leather products	53.0	60.3	62.2	58.3	55.5	57.8	57.4	59.5	59.8	61.1
Service-producing	130.8	131.6	133.8	134.3	128.4	131.0	131.5	131.9	131.7	131.7
Transportation and public utilities	106.3	108.0	109.8	108.9	105.8	107.7	107.9	108.5	108.2	108.3
Wholesale trade	118.5	117.5	118.7	118.3	117.1	116.9	117.4	117.7	117.6	117.1
Retail trade	121.5	120.6	123.2	124.5	118.3	120.3	121.6	121.2	120.3	121.2
Finance, insurance, and real estate	139.8	141.9	144.2	143.8	137.3	141.5	142.0	142.5	142.5	141.2
Services	149.2	151.4	153.6	154.5	146.5	150.2	150.3	151.2	151.5	151.5

[1] See footnote 1, table B-2

p = preliminary.

Table B-6. Indexes of diffusion: Percent of industries in which employment[1] increased

Time span	Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Over 1-month span	1985........	53.9	47.0	52.4	47.3	53.2	46.8	53.8	53.8	47.8	53.2	54.3	57.3
	1986........	53.2	48.1	48.1	53.5	52.4	46.8	52.4	56.2	55.1	53.2	59.7	59.7
	1987........	53.5	56.8	58.6	58.4	58.6	p58.6	p66.2					
Over 3-month span	1985........	51.1	48.4	42.4	46.5	44.3	49.7	47.0	48.6	45.9	47.6	55.1	56.5
	1986........	49.7	44.9	45.7	48.4	47.6	45.4	48.4	55.1	55.9	58.1	58.6	60.3
	1987........	58.6	59.5	61.1	61.6	p62.4	p65.7						
Over 6-month span	1985........	46.5	46.5	43.2	44.3	44.3	45.1	43.0	44.3	49.2	49.2	47.3	45.9
	1986........	47.6	47.6	43.0	43.2	45.4	48.4	47.3	53.0	59.2	58.9	57.8	58.9
	1987........	61.9	62.7	p60.3	p68.9								
Over 12-month span	1985........	44.6	44.1	43.8	40.8	41.6	41.6	42.2	42.4	43.8	44.3	44.1	42.4
	1986........	43.2	44.1	46.2	45.7	47.8	49.5	49.5	51.6	54.9	52.2	55.1	p58.1
	1987........	p63.0											

[1] Number of employees, seasonally adjusted for 1, 3, and 6 month spans, on payrolls of 185 private nonagricultural industries. Data for the 12-month span are unadjusted.

p = preliminary

NOTE: Figures are the percent of industries with employment rising. (Half of the unchanged components are counted as rising.) Data are centered within the spans.

Senator **Sarbanes**. I want to direct some questions to you at the end of our hearing with you this morning that bear on the hearing that's to follow.

They deal with the 1990 census and the Office of Management and Budget's proposal to cut a significant number of questions from that census.

But before we turn to that, we obviously need to explore the report you've just given us.

I'll yield to Congressman McMillan to begin the questioning.

Representative **McMillan**. Thank you, Mr. Chairman. And, welcome again, Mrs. Norwood.

Mrs. **Norwood**. Thank you.

Representative **McMillan**. You mentioned in your statement revision of GNP figures that changed significantly, productivity figures in manufacturing.

Would you be a little bit more explicit in terms of what revisions were made and what period that covered?

Mrs. **Norwood**. The GNP data have been revised for the last 3 years. And to generate the productivity data, of course, we rely on the output information that comes from the GNP.

It is my understanding that the largest part of the 3-year revision was for 1986. A good part of the revision was in personal consumption expenditures, which is probably related in many ways to the retail sales data and another part was related to the trade data. And then there were some other changes that were made.

Representative **McMillan**. Two areas that I think we've—one in particular we've focused on in the past. You mentioned that construction employment had been steady for the first 6 months of this year?

Mrs. **Norwood**. That's correct.

Representative **McMillan**. Is that in seasonally adjusted figures, or absolute figures?

Mrs. **Norwood**. That's seasonally adjusted.

Representative **McMillan**. Would that be a normal trend in construction, or would we normally, even with seasonal adjustment, expect some increase?

Mrs. **Norwood**. That's somewhat flatter than we would have expected. If you go back several years, we had increases that were fairly substantial, say 20,000 to 35,000. This is probably related to the declines in the last few months in housing starts; although housing permit information suggests that there is going to be a pickup in the future.

Representative **McMillan**. We really had two things impacting construction. I suppose, particularly housing, some uptick in interest rates, plus——

Mrs. **Norwood**. Yes.

Representative **McMillan** [continuing]. Some argue that the Tax Reform Act has had some effect on new starts in construction. And I suppose that would impact housing as well.

But it would strike me, given those two factors, that performances remained essentially strong, given those——

Mrs. **Norwood**. But has not declined

Representative **McMillan**. That's correct. And has not declined from a very solid, high level of performance.

The other area had to do with teenagers. Could you comment on teenage unemployment within the first 6 months of this year relative to comparable periods?

Because that's been one area that's been of particular concern to all of us.

Mrs. NORWOOD. There has been considerable improvement in the unemployment data for teenagers. The July rate is 15.5 percent, although that bounces around a good bit. You need data over several months in order to understand what's going on.

And we have to understand, too, that it is a relatively small group, so we need more than a full percentage point change for it to be statistically significant.

Since February, there has been a considerable decline. The unemployment rate for teenagers in February was 18 percent, is now down to 15.5 percent.

As you know, during the months of May and June, we're always a little hesistant to put a great deal of emphasis on the teenager data. The July data are probably more reflective of the situation and are probably more correct.

So that's a very good sign, I think.

Representative MCMILLAN. One additional question. You may not have these figures at the top of your head, but could you characterize the unemployment rate at this stage in this economic expansion in contrast to other expansions in the post-World War II period?

Mrs. NORWOOD. The unemployment rate—well, the current recovery period, which of course has extended a very long time now—56 months—has been characterized by a very strong reduction in unemployment.

And that reduction in unemployment has been considerably larger both in absolute terms, of course, and in percentage terms, than in most of the previous recessions.

The unemployment has gone down. For example, from March 1975 to November 1979, which is the comparable period of the recovery after the 1973–75 recession, unemployment went down by 21.8 percent.

In the current recovery, the last 56 months of recovery, unemployment declined by 39.5 percent. So there's a much greater decline.

Now, part of that is because the labor force increased much less in this recovery than in the past recovery because we have moved through a good bit of the baby boom generation's entrance into the labor force.

Representative MCMILLAN. I think, as we pointed out in the past, I think that speaks well for the economy because much of this has occurred in the face of over a 2- to 3-year period of substantially increased imports into this country, which it would be expected would have a negative impact on job creation.

So the economy has been able to—not that we like that, but able to overcome that to a great extent.

Mrs. NORWOOD. We clearly are seeing a restructuring of employment in this country away from manufacturing, particularly durable manufacturing, toward the service-producing sector. That's been going on for some years now.

Representative McMillan. Thank you very much.

I yield back the balance of my time.

Senator Sarbanes. Thank you very much, Congressman.

Commissioner, let me ask you one question on the unemployment figures before I turn to the question of the 1990 census.

You say in your statement that the number of workers working part time for economic reasons—in other words, workers who wanted to work full time, but couldn't find full-time work and, therefore, were taking part-time jobs—rose by 325,000.

Mrs. Norwood. That's correct.

Senator Sarbanes. Is that the figure that is set against the figure at the top of the second page in terms of the increase in total civilian employment?

Mrs. Norwood. It's related, certainly. There are and there have always been a large number of people who are working part time, and some of them want full-time jobs.

The difference this month is that that figure, which is still fairly high—it's over 5 million—was trending downward for several months.

This month, there was a jump in the number of those people. And as I have said, I'm not sure whether that jump will be sustained or not, but it is something that I would rather see continue to head downward.

Senator Sarbanes. If you look at the increase in employment, is 325,000 of that increase the increase in part-time employment?

Mr. Plewes. It doesn't work out exactly. A good part of the increase in part-time jobs this month was due to an increase in part time for economic reasons. So, it's not completely fair to characterize the increase in overall employment as being driven entirely by part-time factors. But, there is that factor.

Mrs. Norwood. Fourteen-plus million people are working part time because that's what they want to do. It appears from this month's numbers that in addition, 5.5 million workers said that they really want full-time work.

And we don't know how lasting that will be. We'll really have to wait for a few months to see.

Senator Sarbanes. Before you depart, since the Bureau of Labor Statistics is vitally concerned with the quantity and quality of our statistical data, I'd like to put a couple of questions to you.

We are going to hold, as you may know, a hearing immediately after we conclude this one on the possible effects of the proposal by the Office of Management and Budget to drop from the 1988 census dress rehearsal—in other words, the preparation for the 1990 census—a large number of questions that had been hitherto scheduled for inclusion.

This obviously raises some serious concerns about the comprehensiveness and the quality of the Federal statistical base. And we'll be going into that in some detail.

I'm sure you're aware that the proposal would delete a number of questions from the 1990 census, including questions relating to housing and employment.

Obviously, the BLS is a heavy user of information that comes from census questions.

Do you have any perception now of how the statistical programs of the BLS might be affected by the proposals for the 1990 census?

Mrs. NORWOOD. Yes, I do, Mr. Chairman.

Let me say first that the Bureau of Labor Statistics staff has over the last 3 years been working with an interagency group that has involved both OMB and the Census Bureau on issues related to data in the census.

I can tell you that early in that period, the Bureau of Labor Statistics proposed a number of additional questions for the census. We lost out on many of those because the decision was that the burden on respondents would be too great.

I certainly understand the need to be extraordinarily careful both about the overall overloading of the Census Bureau questionnaire and also about the need to be certain that data are really needed for the entire sample or for smaller samples.

It is my understanding that OMB has requested further justification of certain questions.

All of those questions affect the BLS programs. Several of them, however, affect two very important programs very severely. And I'd like to comment very briefly on those.

Either the elimination or reduction of the number of people who would be asked the questions on housing and, in particular, question 31B on the number of weeks worked, would severely affect the Consumer Price Index program.

The number of weeks worked, for example, is one of the parts of the definition of the wage earner/clerical worker group for the urban wage earner and clerical worker, CPI.

We would——

Senator SARBANES. Would you pull that microphone a little closer?

Mrs. NORWOOD. I'm sorry.

Senator SARBANES. Maybe if you moved your notebook there.

Mrs. NORWOOD. Yes. We would not be able to define——

Senator SARBANES. That's much better.

Mrs. NORWOOD [continuing]. The wage earner clerical worker group without the question 31B on the number of weeks worked unless we were to change the definition. And that's a definition that has been in place since World War I.

There are a series of housing questions which involve things like the value of the house, the year built, the rent value, and so on, which are used as variables in the selection of the expenditure survey sample.

The expenditure survey is used, as you know, as the basis of the CPI weights and of CPI item sample. Our estimate is that without the needed housing questions there probably would be about a 50-percent reduction in the reliablity of that survey. That would require us to expand the consumer expenditure survey considerably. That, of course, would increase that burden on respondents, and we think the cost could be some $10 million plus.

And that estimate, by the way, is one that we had made long before this became a critical issue today. So it was not a hasty estimate that was made just overnight.

In addition, we conduct a survey of housing in order to get both owner-occupied housing and rental housing for both CPI's, the urban index and wage earner index.

For that survey, our procedure is to select the units through clusters of city blocks in the individual areas in order to increase the sample efficiency.

Without the data gained from several of the questions under discussion, we would have to increase our housing sample work enormously.

I'm informed that we now do somewhat less than 500,000 units; in order to get the same reliability, we would have to increase that to somewhere between 3 and 6 million units.

In addition, we use information on utilities, the type of utilities, the type of heating in the CPI program.

The other program that would be very severely affected by the elimination or reduction in many of these questions, particularly those on employment and unemployment, is our local area unemployment statistics program.

As you know, we at the Bureau of Labor Statistics are required by law to develop unemployment estimates for 5,400 geographic areas. And that includes States. It includes statistical areas. It includes all the counties of the country and all cities that have a population of 25,000 or more.

For those purposes, we use the detailed census data by detailed geography in order to be able to derive the employment and unemployment data, as well as data by class of worker, and the number of people with a job but not at work. These data are needed in order to have geographic area data that are consistent with the national unemployment data.

As you know, these geographic area data are important. They are used to allocate funds as well as to trigger on and off a number of programs. And, of course, I don't need to tell you that they have some political significance in local areas and States.

We use the information obtained from the census to adjust data for place of work and place of residence, since the national definition of unemployment is based upon where people live, not necessarily where they work. And we also would need these data to just aggregate information in order to produce the data for the smaller areas of the country.

Now, there are a lot of other ways in which we use data from the census. They are used in the productivity program. They're used in our occupational outlook program. The employment data are used to weigh the employment cost index.

They are used in an industry occupational matrix, which we produce in our Federal-State cooperative program which the States use in order to develop projections of the future.

I don't believe that those uses are as important as the uses for the two programs that I have described. In those cases, the data needed are absolutely critical. And we are preparing further justifications to send to OMB. And it is my hope that we will not have a problem in continuing to obtain these data.

Senator **Sarbanes**. Let me ask just a question on the process. BLS is part of the interagency group. Is that correct?

Mrs. **Norwood**. Yes, we are.

Senator SARBANES. How large is the interagency group?

Mrs. NORWOOD. Well, Tom Plewes has been representing us.

Mr. PLEWES. I don't know the number of agency representatives. It's more than a dozen. I think that OMB can better address that.

Senator SARBANES. Does OMB chair the group?

Mr. PLEWES. That's correct, yes.

Senator SARBANES. Well, we obviously will probe this with them. But I understand that this proposal to drop 30 questions from the dress rehearsal comes fairly late in the process.

Has there not been an extended process going on literally over a number of years?

Mrs. NORWOOD. Yes.

Senator SARBANES. Leading toward the 1990 census and trying to develop a questionnarie?

Mrs. NORWOOD. Yes, these issues have been discussed for some 2 to 3 years. And there has in fact been some testing of some of these questions. And it has come as something of a surprise that further justification is required.

But we will make that justification. And we have every hope that they will be considered.

Senator SARBANES. Senator Melcher.

Senator MELCHER. No questions.

Senator SARBANES. Congressman Hawkins.

Representative HAWKINS. No questions. Thank you.

Senator SARBANES. Well, Commissioner, we're pleased to have you back before us this morning. We thank you very much for your testimony.

Mrs. NORWOOD. Thank you, Mr. Chairman.

Senator SARBANES. We'll take just about a 2-minute break while we prepare for the hearing on the census, 1990 census issue.

[Whereupon, at 10:07 a.m., the committee adjourned, subject to the call of the Chair.]

EMPLOYMENT-UNEMPLOYMENT

FRIDAY, SEPTEMBER 4, 1987

Congress of the United States,
Joint Economic Committee,
Washington, DC.

The committee met, pursuant to notice, at 9:32 a.m., in room SD-628, Dirksen Senate Office Building, Hon. William Proxmire (member of the committee) presiding.

Present: Senator Proxmire.

Also present: William Buechner, professional staff member.

OPENING STATEMENT OF SENATOR PROXMIRE, PRESIDING

Senator **Proxmire**. This morning the Joint Economic Committee is very pleased to welcome Janet Norwood, Commissioner of the Bureau of Labor Statistics, who will testify on the employment and unemployment situation for August 1987.

According to the unemployment figure released today, the unemployment rate in August remained at 6 percent, the same level as in July. Both employment and the labor force grew by about 350,000, after seasonal adjustment.

Even though there was no change in the overall unemployment rate, the unemployment rate for adults declined slightly in August and went up half a percentage point for teenagers.

The total number of people unemployed was 7.2 million, no improvement at all from the July level. All the new jobs created in August were in service-producing industries with no new jobs in manufacturing.

Overall, then, the August employment figures suggest that the economy is continuing to expand at a slow but steady rate, with almost all of the economy's growth concentrated in the service sectors.

Before you begin, Mrs. Norwood, Senator D'Amato has requested that his opening statement be placed in the record. He had another commitment and is unable to be present.

[The written opening statement of Senator D'Amato follows:]

WRITTEN OPENING STATEMENT OF SENATOR D'AMATO

Good morning, Mr. Chairman. I would also like to welcome the Commissioner of Labor Statistics, Dr. Janet Norwood. Commissioner Norwood, I am most interested in your observations on August employment figures.

As we all know, last month you reported to this committee July's employment figures that were at their lowest since the end of 1979. You reported that the total civilian employment stood at 112,730,000, an all-time record. An impressive increase of 470,000 in just one month's time. The unemployment rate in July dropped 0.2 percentage points to 6.0 percent over June's figure of 6.1 percent. Last month's figure showed a decrease of one percentage point over July of 1986 figure of 7.0 percent.

Your report showed a sign of continued strength in our economy through expansion and creation of new jobs. These figures exceeded the expectations of most economic forecasters.

For the month of August, the unemployment rate remained unchanged from July's figures. The number of individuals employed, as shown by business payrolls, increased by approximately 355,000.

In the State of New York, the unemployment rate for the month of August decreased by .2% over the previous month to 4.3 percent. Overall, Dr. Norwood, these figures paint a bright employment picture in our nation.

For the past year, the employment situation in this nation has been very stable. Unemployment remains steady around 6.3 to 6 percent. Employment levels are at an all time high. This is due in no small part to the lower interest rates and lower inflation that have resulted from the President's economic program. However, the level of employment not only reflects the general health of the economy and specific industries, but also the increase or decrease in the number of Americans bringing home paychecks and their ability to make purchases. Therefore, we must also be aware of the drop in the value of the dollar and its impact on the American worker. Americans need both jobs and good salaries to provide for themselves and their families.

It is my hope that your testimony today will provide additional encouraging information.

Thank you, Mr. Chairman.

Senator PROXMIRE. The committee will now turn to Commissioner Norwood for analysis of the August employment and unemployment data. Then I have some questions on this data because I think it is indicative of some interesting changes in the economy.

Go right ahead.

STATEMENT OF HON. JANET L. NORWOOD, COMMISSIONER, BUREAU OF LABOR STATISTICS, DEPARTMENT OF LABOR, ACCOMPANIED BY THOMAS J. PLEWES, ASSOCIATE COMMISSIONER, OFFICE OF EMPLOYMENT AND UNEMPLOYMENT STATISTICS; AND KENNETH V. DALTON, ASSOCIATE COMMISSIONER, OFFICE OF PRICES AND LIVING CONDITIONS

Mrs. NORWOOD. Thank you very much, Mr. Chairman. Before reading my statement, let me say that I believe that this is my 92d appearance.

Senator PROXMIRE. Your 92d? That is 92 months.

Mrs. NORWOOD. That's right. Ninety-two. Ninety-second appearance before this committee.

Senator PROXMIRE. You don't look a day over 25. [Laughter.]

Mrs. NORWOOD. Thank you.

And you, Mr. Chairman, have been on the other side of the table for nearly all of them, often as presiding officer. I am aware that you have given notice of your plans to engage in other pursuits beginning in 1989.

I would like to tell you that I shall miss you, not because you have always made me feel comfortable behind this table; quite the contrary. At times you have put me on the spot with your searching and incisive questions, and you were always prepared to pursue any response that did not seem complete.

You have always been supportive of a democratic society's need for objective data and of our efforts to produce data of high quality. The Nation's statistical system has had no stronger champion. Those of us who serve in that system will always be in your debt, and I want to thank you.

Senator PROXMIRE. Thank you, Mrs. Norwood. That is a most gracious statement. I hope that everybody in Wisconsin is watching. [Laughter.]

Mrs. NORWOOD. I have with me, as always, Kenneth Dalton on my right, who is our price expert, and Tom Plewes on my left, who is our expert on employment and unemployment data.

As always, we are very, very pleased to be here to provide a few comments to supplement our press release this morning.

The labor market improvements of recent months held in August. Employment rose, and the labor force increased. Both the civilian unemployment rate, at 6 percent, and the overall rate, including resident Armed Forces, at 5.9 percent, were unchanged from July. Both rates have declined substantially since the beginning of the year and are 0.8 of a percentage point below the level of a year ago.

Total employment, as measured by the household survey, rose by 355,000 from July to August, bringing the employment-population ratio to a new high of 61.8 percent. Payroll employment, as measured by the business survey, grew by a much smaller amount, however—only 155,000.

Virtually all of the increase in payroll jobs from July to August was in the service-producing sector. Employment in the services industry itself rose by 90,000, with strong growth in both business and health services. The number of factory jobs, which had increased by 90,000 in the previous month, held steady in August. Moreover, both weekly hours and overtime hours in the Nation's factories continued to be very high by historical standards.

The BLS diffusion index, which is heavily weighted toward manufacturing, was lower than in July but, at 55 percent in August, showed that a considerable number of industries added to their work forces in August.

The data for August marked the 57th month of the current recovery, one of the longest peacetime expansions in our history. During this period, from November 1982 to August 1987, close to 14 million jobs have been added, most of them in service-producing industries. The largest gains occurred in the services industry itself, retail trade, and finance, insurance and real estate.

About 1 million jobs were added in manufacturing, but that industry has still only regained about 45 percent of the jobs lost during the 1981-82 recession. Five manufacturing industries—lumber, furniture, transportation equipment, printing and publishing, and rubber and plastics—now employ considerably more workers than at the July 1981 prerecession speak, but eight industries—primary metals, nonelectrical machinery, instruments, tobacco, apparel, chemicals, petroleum and coal, and leather manufacturing—actually have lost employment since the end of the recession.

When we compare the labor market progress of the current recovery period to the comparable period from March 1975 to December 1979, we find a number of interesting differences. The labor force has grown, but much more slowly than in the 1970's because of more modest growth in the working-age population and in the rate of labor force participation.

Employment has grown considerably during the current recovery, but the pace has been somewhat slower than in the 1975–79 period. The largest difference between the two periods is in the industrial distribution of that growth. While the service-producing sector has grown at about the same rate during the current recovery as in the 1975–79 one, the number of factory jobs has grown far more slowly—by 5.7 percent in the 1982–87 period compared to 15.3 percent in the 1975–79 period.

Another indicator of the difference between the current expansion and that of the late 1970's is the relatively high number of persons working part time for economic reasons. You will recall that last month we reported an increase in this number and cautioned that additional months of data were needed to interpret the significance of the change. We now see a return of this measure to its May to June level of 5.3 million. These "partially unemployed" workers are disproportionately black and female.

In summary, recent improvements in unemployment held up in August. Further employment gains occurred in services, while July's increase in factory jobs was sustained.

Mr. Chairman, my colleagues and I will be glad to try to answer any questions you may have.

[The table and charts attached to Mrs. Norwood's statement, together with the Employment Situation press release, follow:]

Unemployment rates of all civilian workers by alternative seasonal adjustment methods

Month and year	Unadjusted rate	X-11 ARIMA method							X-11 method (official method before 1980)	Range (cols. 2-9)
		Official procedure	Concurrent (as first computed)	Concurrent (revised)	Stable	Total	Residual	12-month extrapolation		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1986										
August......	6.7	6.8	6.8	6.9	6.8	6.9	7.0	6.8	6.8	.2
September...	6.8	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	–
October.....	6.6	6.9	6.9	7.0	7.0	6.9	6.9	7.0	7.0	.1
November....	6.6	6.9	6.9	7.0	6.9	6.9	7.0	6.9	7.0	.1
December....	6.3	6.7	6.7	6.7	6.6	6.7	6.7	6.7	6.7	.1
1987										
January.....	7.3	6.7	6.7	6.7	6.7	6.8	6.6	6.7	6.7	.2
February....	7.2	6.7	6.7	6.6	6.6	6.7	6.5	6.7	6.7	.2
March.......	6.9	6.6	6.6	6.5	6.6	6.6	6.5	6.6	6.6	.1
April.......	6.2	6.3	6.3	6.3	6.4	6.3	6.3	6.3	6.3	.1
May.........	6.1	6.3	6.3	6.3	6.4	6.3	6.4	6.3	6.3	.1
June........	6.3	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	–
July........	6.1	6.0	6.1	6.0	6.0	6.0	6.0	6.0	6.0	.1
August......	5.8	6.0	6.0	6.0	5.9	6.1	6.2	6.0	6.0	.3

SOURCE: U.S. DEPARTMENT OF LABOR
Bureau of Labor Statistics
September 1987

(1) *Unadjusted rate*. Unemployment rate for all civilian workers, not seasonally adjusted.

(2) *Official procedure (X-11 ARIMA method)*. The published seasonally adjusted rate for all civilian workers. Each of the 3 major civilian labor force components--agricultural employment, nonagricultural employment and unemployment--for 4 age-sex groups--males and females, ages 16-19 and 20 years and over--are seasonally adjusted independently using data from January 1974 forward. The data series for each of these 12 components are extended by a year at each end of the original series using ARIMA (Auto-Regressive, Integrated, Moving Average) models chosen specifically for each series. Each extended series is then seasonally adjusted with the X-11 portion of the X-11 ARIMA program. The 4 teenage unemployment and nonagricultural employment components are adjusted with the additive adjustment model, while the other components are adjusted with the multiplicative model. The unemployment rate is computed by summing the 4 seasonally adjusted unemployment components and calculating that total as a percent of the civilian labor force total derived by summing all 12 seasonally adjusted components. All the seasonally adjusted series are revised at the end of each year. Extrapolated factors for January-June are computed at the beginning of each year; extrapolated factors for July-December are computed in the middle of the year after the June data become available. Each set of 6-month factors are published in advance, in the January and July issues, respectively, of *Employment and Earnings*.

(3) *Concurrent (as first computed, X-11 ARIMA method)*. The official procedure for computation of the rate for all civilian workers using the 12 components is followed except that extrapolated factors are not used at all. Each component is seasonally adjusted with the X-11 ARIMA program each month as the most recent data become available. Rates for each month of the current year are shown as first computed; they are revised only once each year, at the end of the year when data for the full year become available. For example, the rate for January 1984 would be based, during 1984, on the adjustment of data from the period January 1974 through January 1984.

(4) *Concurrent (revised, X-11 ARIMA method)*. The procedure used is identical to (3) above, and the rate for the current month (the last month displayed) will always be the same in the two columns. However, all previous months are subject to revision each month based on the seasonal adjustment of all the components with data through the current month.

(5) *Stable (X-11 ARIMA method)*. Each of the 12 civilian labor force components is extended using ARIMA models as in the official procedure and then run through the X-11 part of the program using the stable option. This option assumes that seasonal patterns are basically constant from year-to-year and computes final seasonal factors as unweighted averages of all the seasonal-irregular components for each month across the entire span of the period adjusted. As in the official procedure, factors are extrapolated in 6-month intervals and the series are revised at the end of each year. The procedure for computation of the rate from the seasonally adjusted components is also identical to the official procedure.

(6) *Total (X-11 ARIMA method)*. This is one alternative aggregation procedure, in which total unemployment and civilian labor force levels are extended with ARIMA models and directly adjusted with multiplicative adjustment models in the X-11 part of the program. The rate is computed by taking seasonally adjusted total unemployment as a percent of seasonally adjusted total civilian labor force. Factors are extrapolated in 6-month intervals and the series revised at the end of each year.

(7) *Residual (X-11 ARIMA method)*. This is another alternative aggregation method, in which total civilian employment and civilian labor force levels are extended using ARIMA models and then directly adjusted with multiplicative adjustment models. The seasonally adjusted unemployment level is derived by subtracting seasonally adjusted employment from seasonally adjusted labor force. The rate is then computed by taking the derived unemployment level as a percent of the labor force level. Factors are extrapolated in 6-month intervals and the series revised at the end of each year.

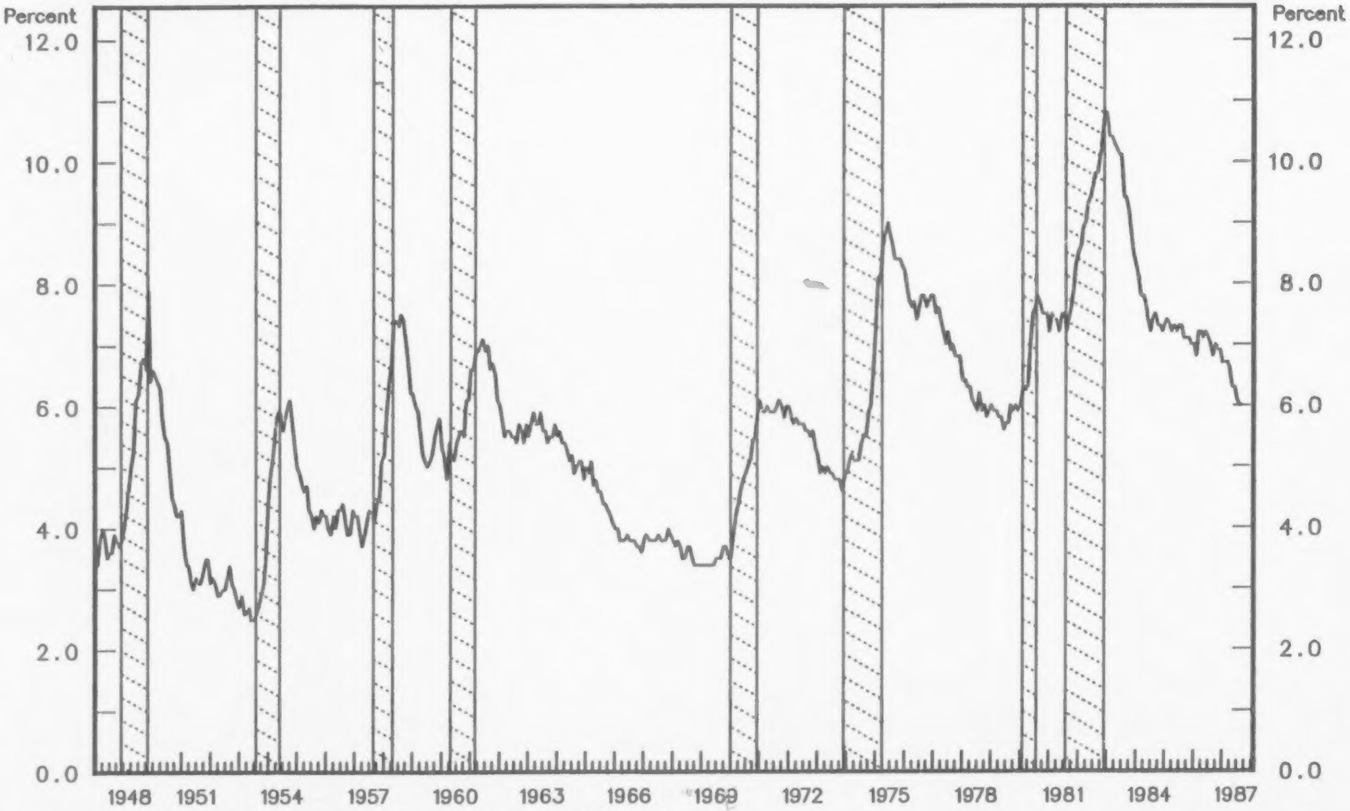
(8) *12-month extrapolation (X-11 ARIMA method)*. This approach is the same as the official procedure except that the factors are extrapolated in 12-month intervals. The factors for January-December of the current year are computed at the beginning of the year based on data through the preceding year. The values for January through June of the current year are the same as the official values since they reflect the same factors.

(9) *X-11 method (official method before 1980)*. The method for computation of the official procedure is used except that the series are not extended with ARIMA models and the factors are projected in 12-month intervals. The standard X-11 program is used to perform the seasonal adjustment.

Methods of Adjustment: The X-11 ARIMA method was developed at Statistics Canada by the Seasonal Adjustment and Times Series Staff under the direction of Estela Bee Dagum. The method is described in *The X-11 ARIMA Seasonal Adjustment Method*, by Estela Bee Dagum, Statistics Canada Catalogue No. 12-564E, February 1980.

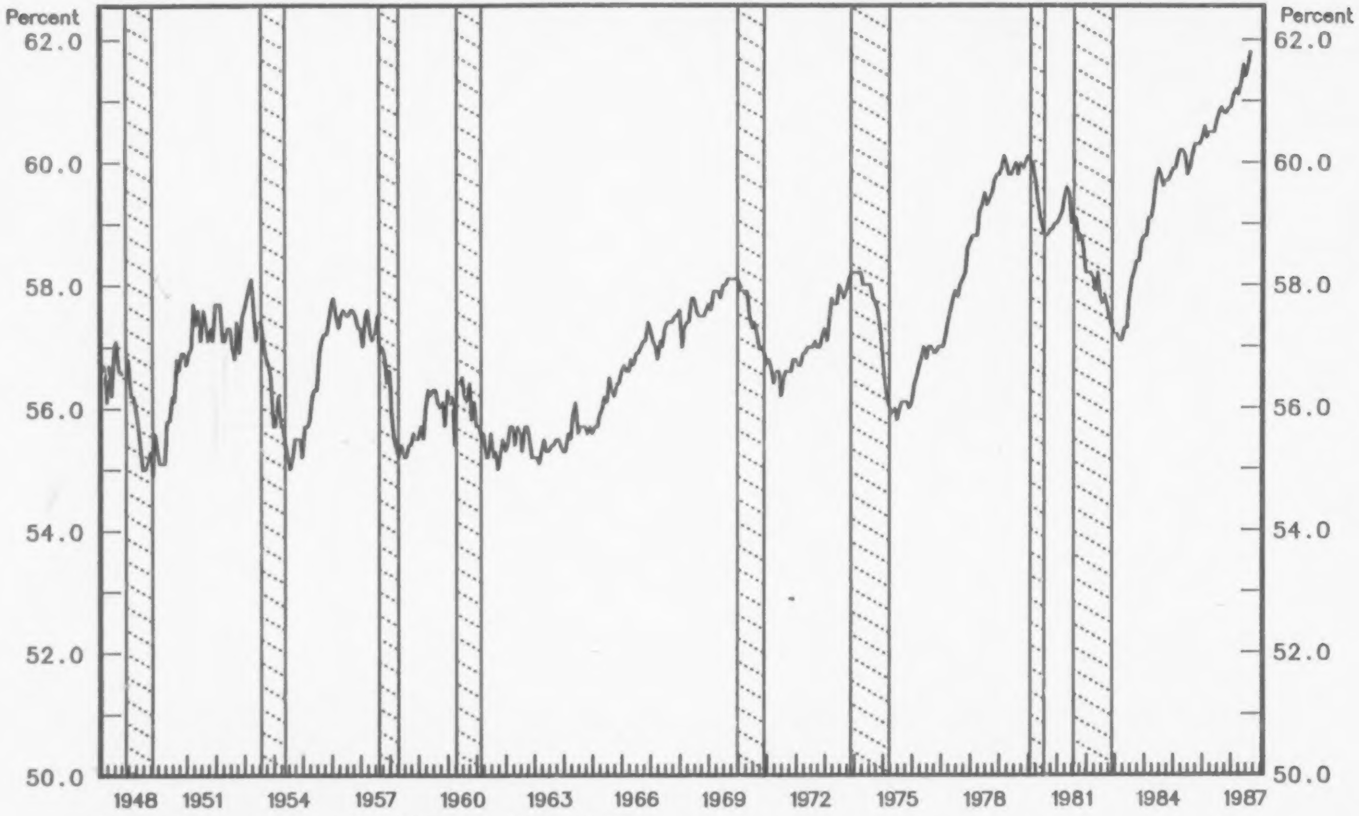
The standard X-11 method is described in *X-11 Variant of the Census Method II Seasonal Adjustment Program*, by Julius Shiskin, Allan Young and John Musgrave (Technical Paper No. 15, Bureau of the Census, 1967).

Chart 1. Unemployment rate of all civilian workers, seasonally adjusted, 1948-87



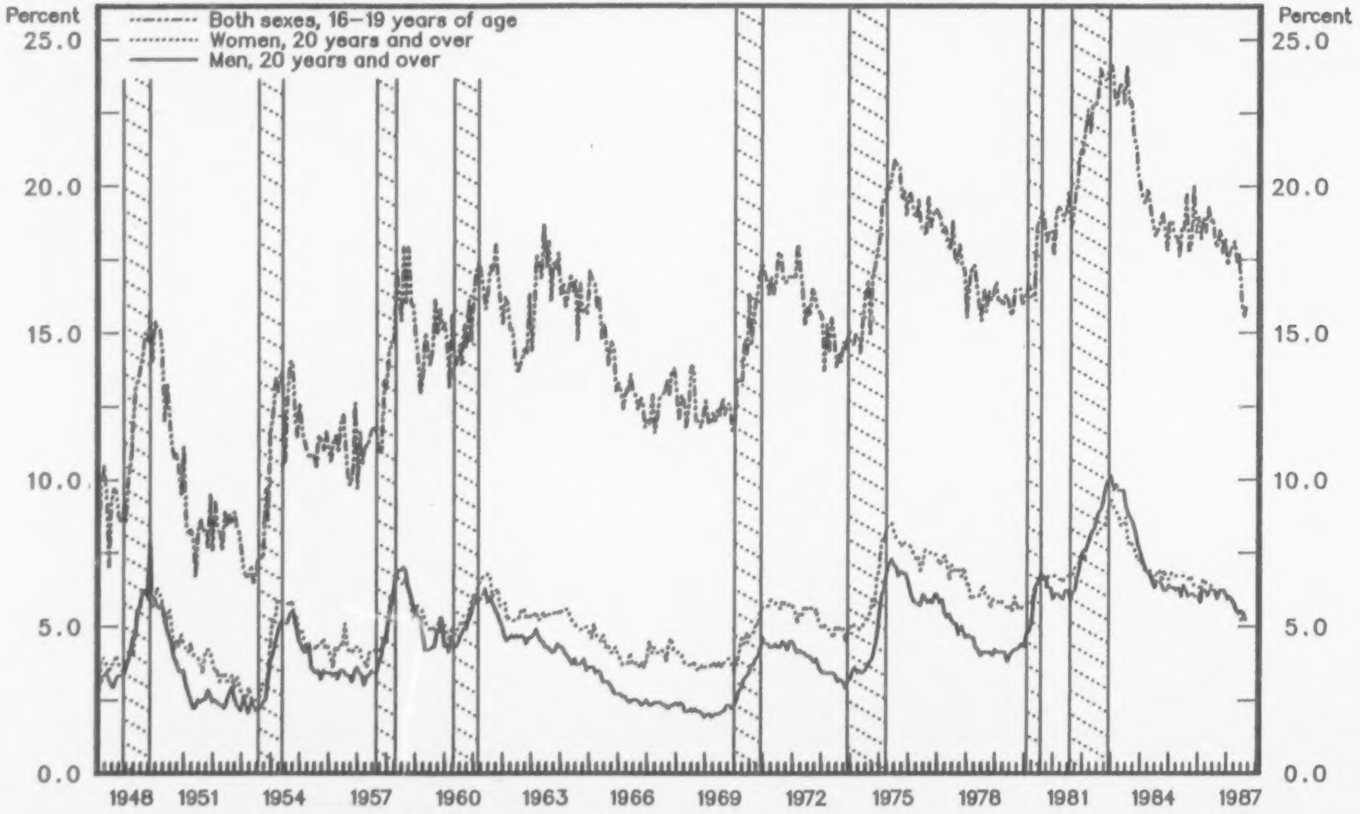
Source: Bureau of Labor Statistics, September 4, 1987.

Chart 2. Civilian employment-population ratio, seasonally adjusted, 1948-87



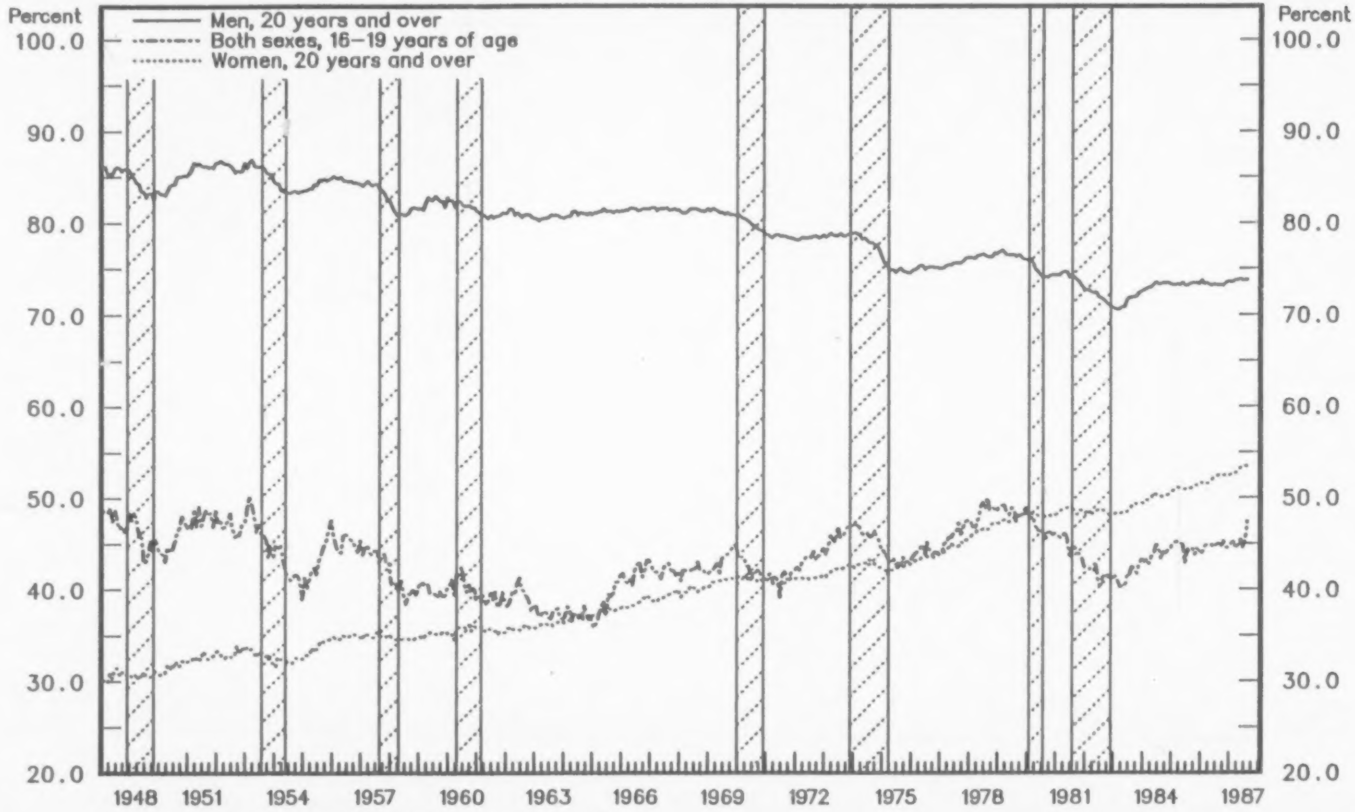
Source: Bureau of Labor Statistics, September 4, 1987.

Chart 3. Unemployment rates for major age-sex groups, seasonally adjusted, 1948-87



Source: Bureau of Labor Statistics, September 4, 1987.

Chart 4. Civilian employment-population ratio for major age-sex groups, seasonally adjusted, 1948-87



Source: Bureau of Labor Statistics, September 4, 1987.

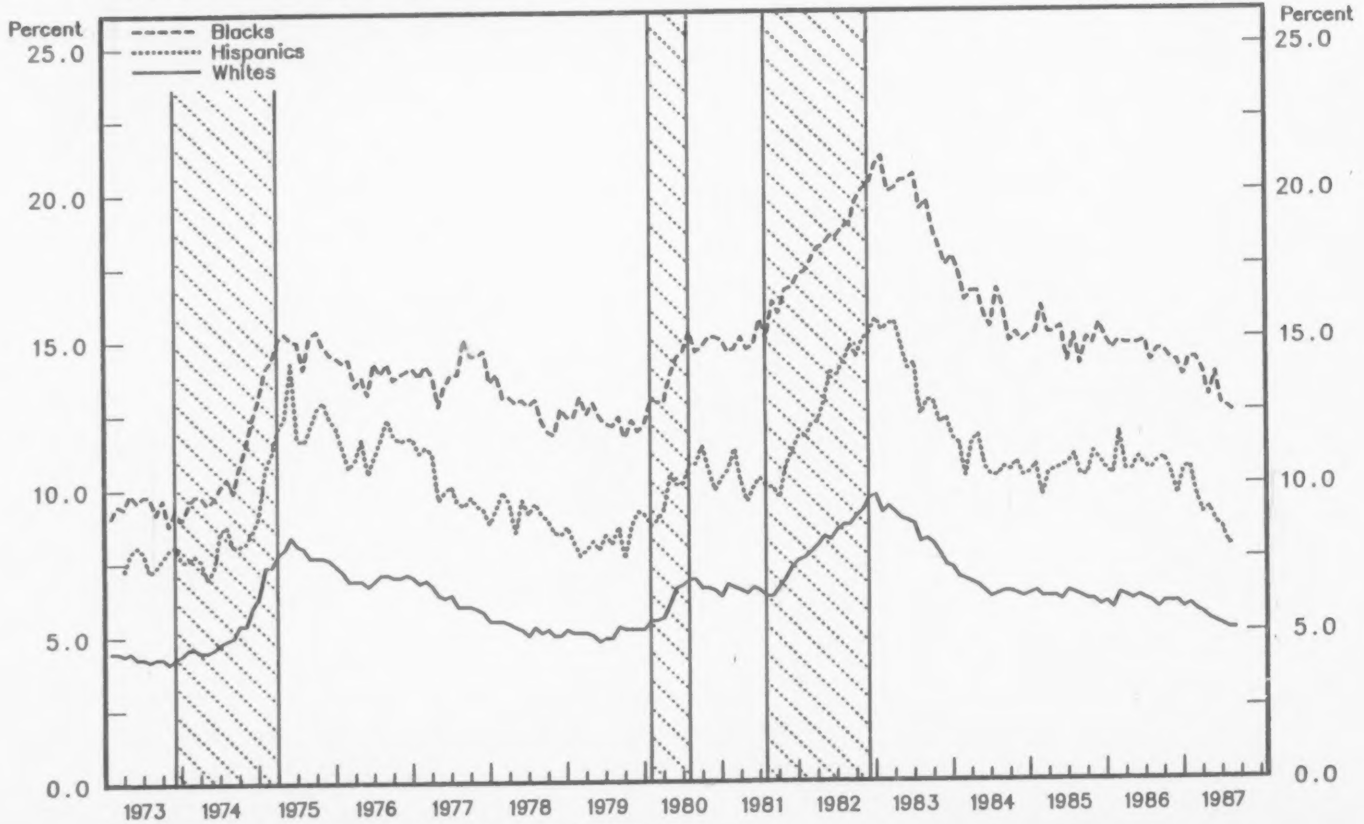
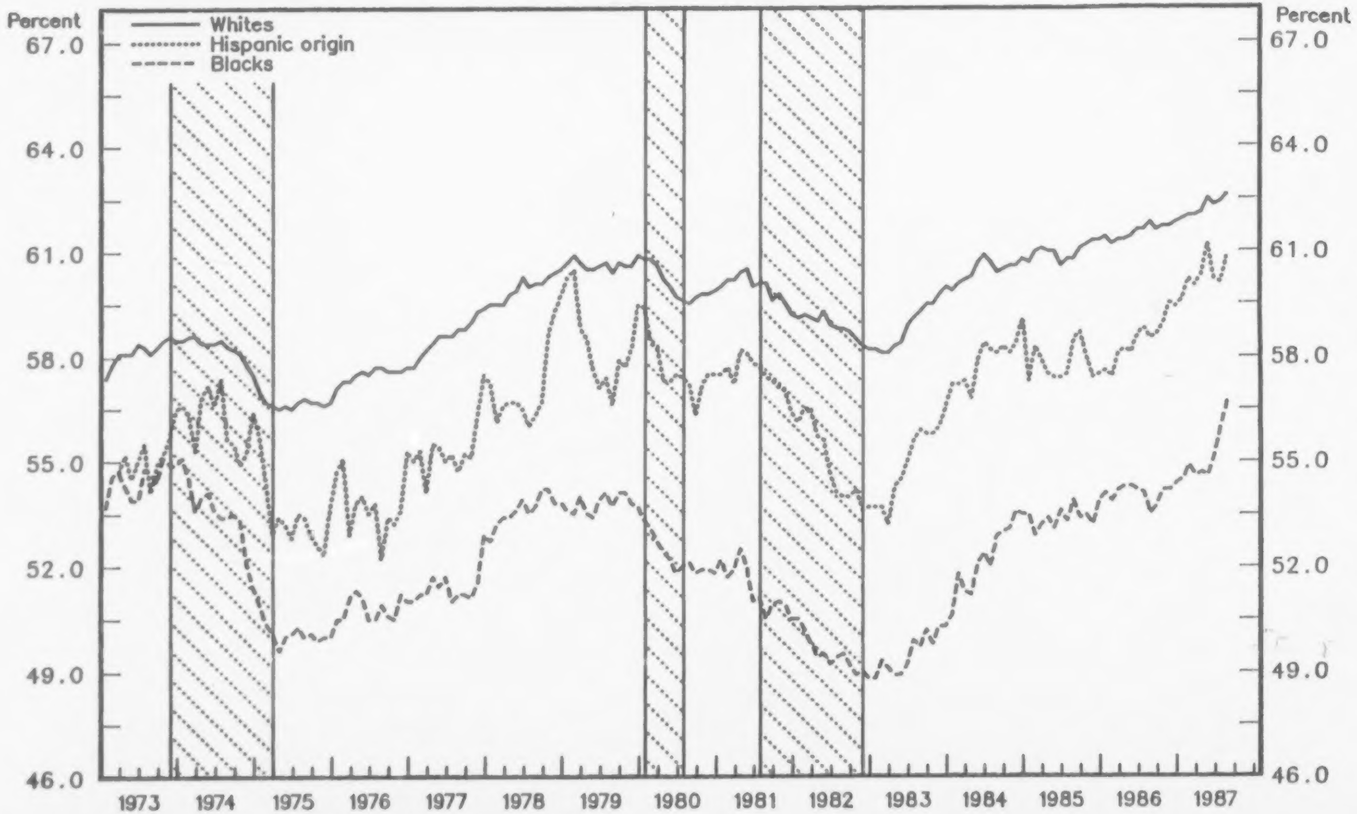


Chart 5. Unemployment rates for whites, blacks, and persons of Hispanic origin, seasonally adjusted, 1973-87

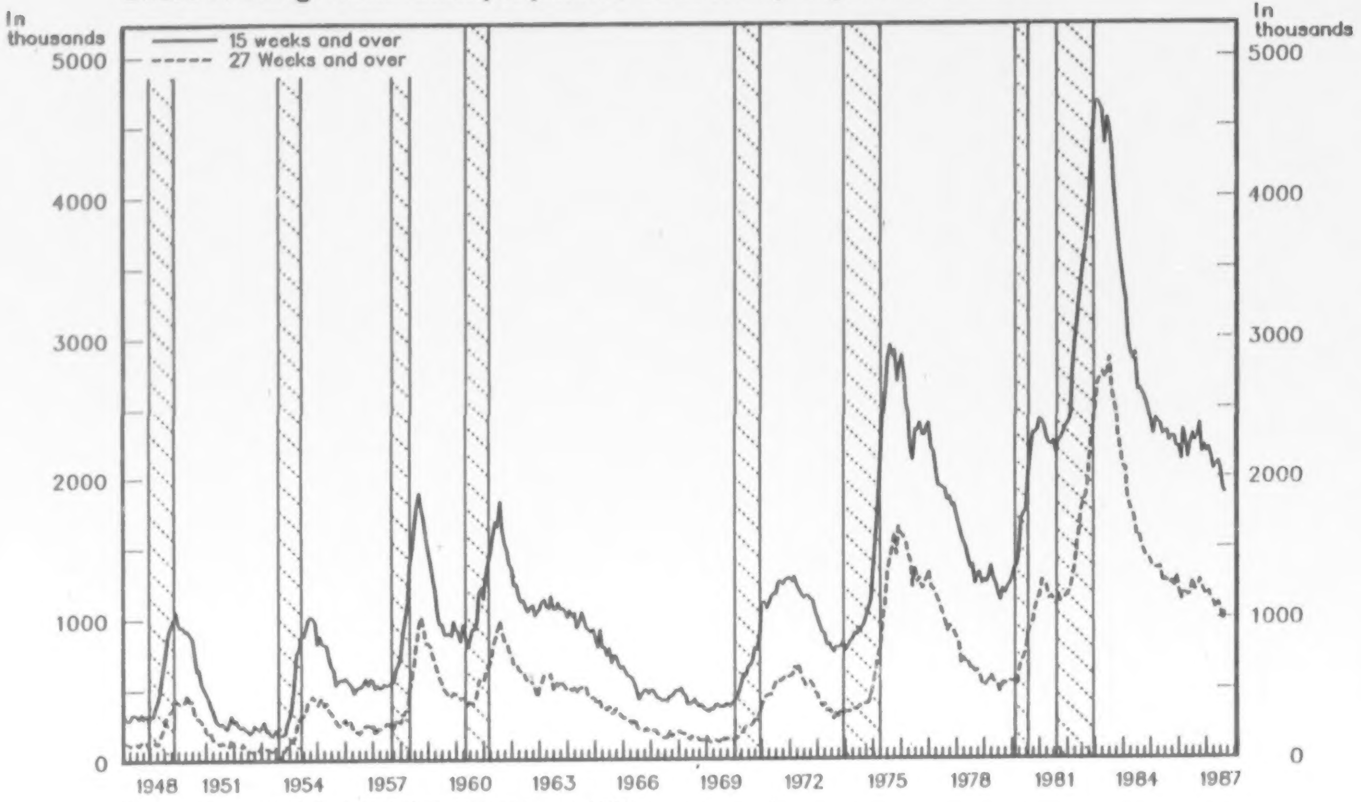
Source: Bureau of Labor Statistics, September 4, 1987.

Chart 6. Civilian employment-population ratio for whites, blacks, and persons of Hispanic origin, seasonally adjusted, 1973-87



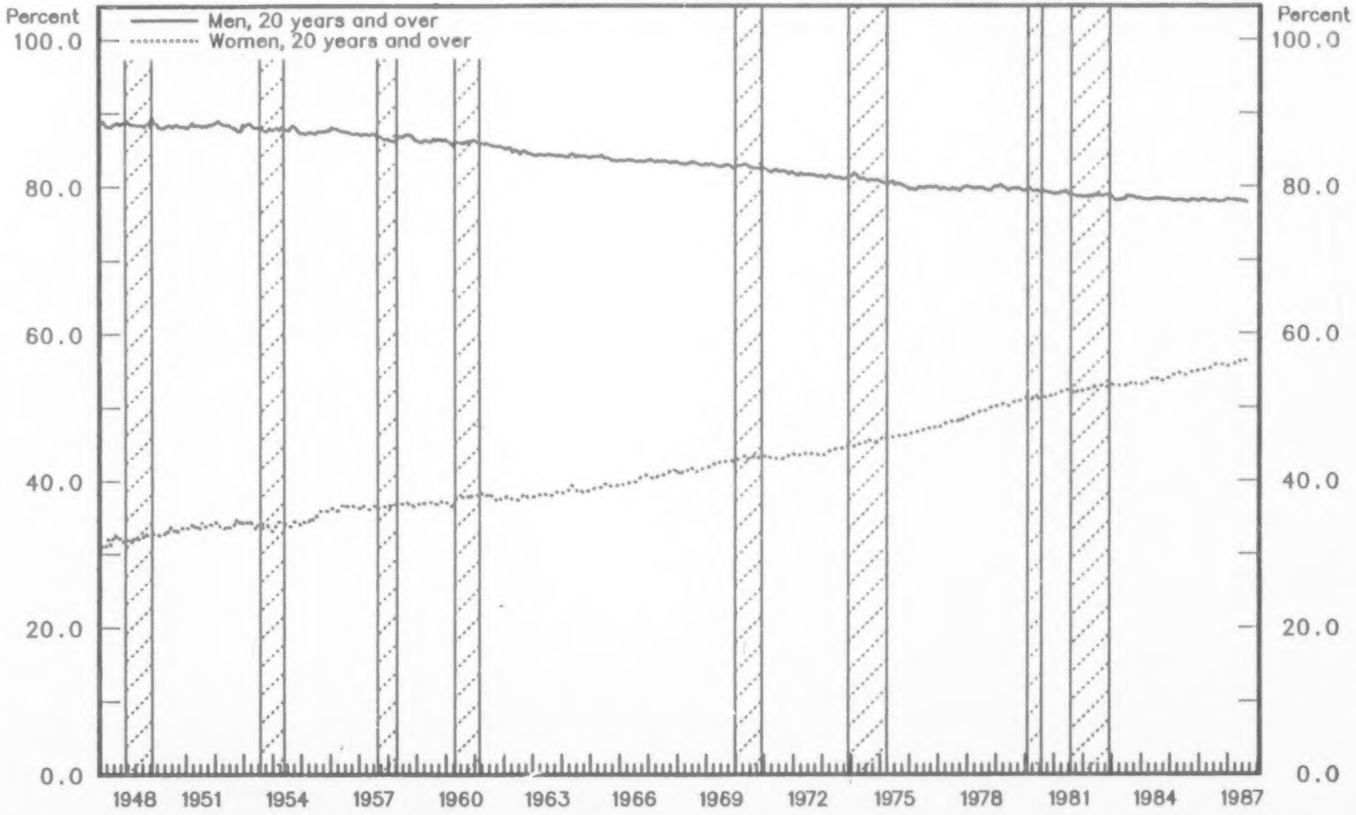
Source: Bureau of Labor Statistics, September 4, 1987.

Chart 7. Long-term unemployment, seasonally adjusted, 1948-87



Source: Bureau of Labor Statistics, September 4, 1987.

Chart 8. Labor force participation rates for adult men and women, seasonally adjusted, 1948-87



Source: Bureau of Labor Statistics, September 4, 1987.

News
United States
Department
of Labor
Bureau of Labor Statistics Washington, D.C. 20212

Technical information: (202) 523-1371
523-1944
523-1959
Media contact: 523-1208

USDL 87-382

TRANSMISSION OF MATERIAL IN THIS
RELEASE IS EMBARGOED UNTIL
8:30 A.M. (EDT), FRIDAY,
SEPTEMBER 4, 1987

THE EMPLOYMENT SITUATION: AUGUST 1987

Employment rose in August and unemployment was unchanged, the Bureau of Labor Statistics of the U.S. Department of Labor reported today. The overall unemployment rate and the civilian worker rate remained at 5.9 and 6.0 percent, respectively. Both rates have declined by 0.7 percentage point since the beginning of this year.

Total civilian employment--as measured by the monthly survey of households--rose by 355,000 in August after seasonal adjustment. Nonfarm payroll employment--as measured by the monthly survey of establishments--was up by 155,000.

Unemployment (Household Survey Data)

The number of unemployed persons was unchanged at 7.2 million in August, after seasonal adjustment, as were the jobless rates for nearly all major labor force groups. The rates for adult men (5.2 percent), adult women (5.3 percent), teenagers (16.0 percent), whites (5.1 percent), blacks (12.4 percent), and Hispanics (8.0 percent) showed little or no over-the-month change. (See tables A-2 and A-3.)

The length of unemployment was also little changed in August. The average (mean) duration of unemployment was about unchanged at 14.3 weeks, while the median duration edged down slightly to 6.4 weeks. (See table A-7.)

The number of persons employed part time for economic reasons--sometimes referred to as the partially unemployed--declined in August to 5.3 million, returning to the May-June levels. Although this figure has edged down slightly thus far in 1987, it remains relatively high by historical standards. (See table A-4.)

Civilian Employment and the Labor Force (Household Survey Data)

Civilian employment declined less than usual in August and, after seasonal adjustment, advanced by 355,000 to 113.1 million. Most of this increase occurred among teenagers. The proportion of the population that is employed rose 0.2 percentage point to a new high of 61.8 percent. (See table A-2.)

The civilian labor force increased to 120.3 million in August, after seasonal adjustment, with the labor force participation rate edging up to 65.7 percent. Over the past year, the labor force has grown by 2.1 million, with about half of the increase occurring among adult women.

Table A. Major indicators of labor market activity, seasonally adjusted

Category	Quarterly averages		Monthly data			July-Aug. change
	1987		1987			
	I	II	June	July	Aug.	
HOUSEHOLD DATA						
	Thousands of persons					
Labor force 1/	120,943	121,341	121,235	121,672	122,038	366
Total employment 1/	112,995	113,906	113,975	114,447	114,817	370
Civilian labor force	119,202	119,615	119,517	119,952	120,302	350
Civilian employment	111,254	112,180	112,257	112,727	113,081	354
Unemployment	7,948	7,435	7,260	7,224	7,221	-3
Not in labor force	62,800	62,912	63,187	62,933	62,700	-233
Discouraged workers	1,168	1,037	N.A.	N.A.	N.A.	N.A.
	Percent of labor force					
Unemployment rates:						
All workers 1/	6.6	6.1	6.0	5.9	5.9	0
All civilian workers	6.7	6.2	6.1	6.0	6.0	0
Adult men	5.9	5.5	5.5	5.4	5.2	-0.2
Adult women	5.8	5.4	5.2	5.4	5.3	-.1
Teenagers	17.9	17.0	15.9	15.5	16.0	.5
White	5.7	5.3	5.2	5.1	5.1	0
Black	14.2	13.2	12.7	12.6	12.4	-.2
Hispanic origin	9.7	8.8	8.5	7.9	8.0	.1
ESTABLISHMENT DATA						
	Thousands of jobs					
Nonfarm employment	101,133	101,708	101,818	p102,114	p102,270	p156
Goods-producing	24,733	24,757	24,761	p24,857	p24,857	p0
Service-producing	76,399	76,951	77,057	p77,257	p77,413	p156
	Hours of work					
Average weekly hours:						
Total private	34.8	34.8	34.8	p34.8	p35.0	p0.2
Manufacturing	41.0	40.9	41.0	p41.0	p41.0	p0
Overtime	3.6	3.7	3.7	p3.8	p3.8	p0

1/ Includes the resident Armed Forces. N.A.=not available.
p=preliminary.

Industry Payroll Employment (Establishment Survey Data)

Total nonagricultural employment rose by 155,000 in August to a seasonally adjusted level of 102.3 million. Virtually all of the job growth occurred in the service-producing sector. (See table B-1.)

Within the service sector, the services industry component continued its strong job expansion, increasing by 90,000 in August. Over the year, 1 million jobs have been added in the industry. As usual, health and business services accounted for most of the over-the-month gain. Job growth continued in finance, insurance, and real estate as employment advanced by 25,000 over the month. Employment in retail and wholesale trade was about unchanged from July levels.

In the goods-producing sector, manufacturing employment was unchanged in August, following a substantial increase (90,000) in July. Employment in automobiles rose by 20,000, after declining by 30,000 in July (seasonally adjusted). Most of the recent employment fluctuations in this industry result from early plant shutdowns for model changeover and extended layoffs for inventory reductions. In contrast, employment in apparel and other textile products declined by 20,000, a return to the June level. Construction employment was unchanged at 5.0 million in August. Mining and its oil and gas extraction component continued the gradual recovery from the job losses of the 1985-86 period.

Weekly Hours (Establishment Survey Data)

The average workweek of production or nonsupervisory workers on private nonagricultural payrolls expanded by 0.2 hour after seasonal adjustment, reaching 35.0 hours. Most of this increase occurred in retail trade and wholesale trade. Manufacturing hours remained at 41.0 for the fourth consecutive month, and overtime hours were unchanged from July at 3.8, both historically high levels. (See table B-2.)

The index of aggregate weekly hours of production or nonsupervisory workers on private nonagricultural payrolls increased 0.5 percent in August to 121.2 (1977=100), seasonally adjusted. The manufacturing index was about unchanged at 93.7. (See table B-5.)

Hourly and Weekly Earnings (Establishment Survey Data)

Average hourly earnings rose 0.8 percent in August, while average weekly earnings rose 1.4 percent, seasonally adjusted. Before seasonal adjustment, average hourly earnings rose by 4 cents to $8.95, and average weekly earnings were up $4.09 to $315.94. Over the year, hourly earnings were up 25 cents and weekly earnings rose $10.57.

The Hourly Earnings Index (Establishment Survey Data)

The Hourly Earnings Index (HEI) was 173.9 (1977=100) in August, seasonally adjusted, an increase of 0.4 percent from July. For the 12 months ended in August, the increase was 2.6 percent. The HEI excludes the effects of two types of changes unrelated to underlying wage rate movements--fluctuations in manufacturing overtime and interindustry employment shifts. In dollars of constant purchasing power, the HEI decreased 1.4 percent during the 12-month period ended in July. (See table B-4.)

The Employment Situation for September 1987 will be released on Friday, October 2, at 8:30 A.M. (EDT).

Explanatory Note

This news release presents statistics from two major surveys, the Current Population Survey (household survey) and the Current Employment Statistics Survey (establishment survey). The household survey provides the information on the labor force, total employment, and unemployment that appears in the A tables, marked HOUSEHOLD DATA. It is a sample survey of about 59,500 households that is conducted by the Bureau of the Census with most of the findings analyzed and published by the Bureau of Labor Statistics (BLS).

The establishment survey provides the information on the employment, hours, and earnings of workers on nonagricultural payrolls that appears in the B tables, marked ESTABLISHMENT DATA. This information is collected from payroll records by BLS in cooperation with State agencies. The sample includes over 290,000 establishments employing over 38 million people.

For both surveys, the data for a given month are actually collected for and relate to a particular week. In the household survey, unless otherwise indicated, it is the calendar week that contains the 12th day of the month, which is called the survey week. In the establishment survey, the reference week is the pay period including the 12th, which may or may not correspond directly to the calendar week.

The data in this release are affected by a number of technical factors, including definitions, survey differences, seasonal adjustments, and the inevitable variance in results between a survey of a sample and a census of the entire population. Each of these factors is explained below.

Coverage, definitions, and differences between surveys

The sample households in the household survey are selected so as to reflect the entire civilian noninstitutional population 16 years of age and older. Each person in a household is classified as employed, unemployed, or not in the labor force. Those who hold more than one job are classified according to the job at which they worked the most hours.

People are classified as *employed* if they did any work at all as paid civilians; worked in their own business or profession or on their own farm; or worked 15 hours or more in an enterprise operated by a member of their family, whether they were paid or not. People are also counted as employed if they were on unpaid leave because of illness, bad weather, disputes between labor and management, or personal reasons. Members of the Armed Forces stationed in the United States are also included in the employed total.

People are classified as *unemployed*, regardless of their eligibility for unemployment benefits or public assistance, if they meet all of the following criteria: They had no employment during the survey week; they were available for work at that time; and they made specific efforts to find employment sometime during the prior 4 weeks. Persons laid off from their former jobs and awaiting recall and those expecting to report to a job within 30 days need not be looking for work to be counted as unemployed.

The *labor force* equals the sum of the number employed and the number unemployed. The *unemployment rate* is the percentage of unemployed people in the labor force (civilian plus the resident Armed Forces). Table A-5 presents a special grouping of seven measures of unemployment based on varying definitions of unemployment and the labor force. The definitions are provided in the table. The most restrictive definition yields U-1 and the most comprehensive yields U-7. The overall unemployment rate is U-5a, while U-5b represents the same measure with a civilian labor force base.

Unlike the household survey, the establishment survey only counts wage and salary employees whose names appear on the payroll records of nonagricultural firms. As a result, there are many differences between the two surveys, among which are the following:

- The household survey, although based on a smaller sample, reflects a larger segment of the population; the establishment survey excludes agriculture, the self-employed, unpaid family workers, private household workers, and members of the resident Armed Forces.

- The household survey includes people on unpaid leave among the employed; the establishment survey does not.

- The household survey is limited to those 16 years of age and older; the establishment survey is not limited by age.

- The household survey has no duplication of individuals, because each individual is counted only once; in the establishment survey, employees working at more than one job or otherwise appearing on more than one payroll would be counted separately for each appearance.

Other differences between the two surveys are described in "Comparing Employment Estimates from Household and Payroll Surveys," which may be obtained from the BLS upon request.

Seasonal adjustment

Over the course of a year, the size of the Nation's labor force and the levels of employment and unemployment undergo sharp fluctuations due to such seasonal events as changes in weather, reduced or expanded production, harvests, major holidays, and the opening and closing of schools. For example, the labor force increases by a large number each June, when schools close and many young people enter the job market. The effect of such seasonal variation can be very large; over the course of a year, for example, seasonality may account for as much as 95 percent of the month-to-month changes in unemployment.

Because these seasonal events follow a more or less regular pattern each year, their influence on statistical trends can be eliminated by adjusting the statistics from month to month. These adjustments make nonseasonal developments, such as declines in economic activity or increases in the participation of women in the labor force, easier to spot. To return to the school's-out example, the large number of people entering the labor force each June is likely to obscure any other changes that have taken place since May, making it difficult to determine if the level of economic activity has risen or declined. However, because the effect of students finishing school in previous years is known, the statistics for the current year can be adjusted to allow for a comparable change. Insofar as the seasonal adjustment is made correctly, the adjusted figure provides a more useful tool with which to analyze changes in economic activity.

Measures of labor force, employment, and unemployment contain components such as age and sex. Statistics for all employees, production workers, average weekly hours, and average hourly earnings include components based on the employer's industry. All these statistics can be seasonally adjusted either by adjusting the total or by adjusting each of the components and combining them. The second procedure usually yields more accurate information and is therefore followed by BLS. For example, the seasonally adjusted figure for the labor force is the sum of eight seasonally adjusted civilian employment components, plus the resident Armed Forces total (not adjusted for seasonality), and four seasonally adjusted unemployment components; the total for unemployment is the sum of the four unemployment components; and the overall unemployment rate is derived by dividing the resulting estimate of total unemployment by the estimate of the labor force.

The numerical factors used to make the seasonal adjustments are recalculated regularly. For the household survey, the factors are calculated for the January-June period and again for the July-December period. The January revision is applied to data that have been published over the previous 5 years. For the establishment survey, updated factors for seasonal adjustment are calculated only once a year, along with the introduction of new benchmarks which are discussed at the end of the next section.

Sampling variability

Statistics based on the household and establishment surveys are subject to sampling error, that is, the estimate of the number of people employed and the other estimates drawn from these surveys probably differ from the figures that would be obtained from a complete census, even if the same questionnaires and procedures were used. In the household survey, the amount of the differences can be expressed in terms of standard errors. The numerical value of a standard error depends upon the size of the sample, the results of the survey, and other factors. However, the numerical value is always such that the chances are approximately 68 out of 100 that an estimate based on the sample will differ by no more than the standard error from the results of a complete census. The chances are approximately 90 out of 100 that an estimate based on the sample will differ by no more than 1.6 times the standard error from the results of a complete census. At approximately the 90-percent level of confidence—the confidence limits used by BLS in its analyses—the error for the monthly change in total employment is on the order of plus or minus 328,000; for total unemployment it is 220,000; and, for the overall unemployment rate, it is 0.19 percentage point. These figures do not mean that the sample results are off by these magnitudes but, rather, that the chances are approximately 90 out of 100 that the "true" level or rate would not be expected to differ from the estimates by more than these amounts.

Sampling errors for monthly surveys are reduced when the data are cumulated for several months, such as quarterly or annually. Also, as a general rule, the smaller the estimate, the larger the sampling error. Therefore, relatively speaking, the estimate of the size of the labor force is subject to less error than is the estimate of the number unemployed. And, among the unemployed, the sampling error for the jobless rate of adult men, for example, is much smaller than is the error for the jobless rate of teenagers. Specifically, the error on monthly change in the jobless rate for men is .26 percentage point; for teenagers, it is 1.25 percentage points.

In the establishment survey, estimates for the 2 most current months are based on incomplete returns; for this reason, these estimates are labeled preliminary in the tables. When all the returns in the sample have been received, the estimates are revised. In other words, data for the month of September are published in preliminary form in October and November and in final form in December. To remove errors that build up over time, a comprehensive count of the employed is conducted each year. The results of this survey are used to establish new benchmarks—comprehensive counts of employment—against which month-to-month changes can be measured. The new benchmarks also incorporate changes in the classification of industries and allow for the formation of new establishments.

Additional statistics and other information

In order to provide a broad view of the Nation's employment situation, BLS regularly publishes a wide variety of data in this news release. More comprehensive statistics are contained in *Employment and Earnings*, published each month by BLS. It is available for $8.50 per issue or $22.00 per year from the U.S. Government Printing Office, Washington, D.C., 20204. A check or money order made out to the Superintendent of Documents must accompany all orders.

Employment and Earnings also provides approximations of the standard errors for the household survey data published in this release. For unemployment and other labor force categories, the standard errors appear in tables B through J of its "Explanatory Notes." Measures of the reliability of the data drawn from the establishment survey and the actual amounts of revision due to benchmark adjustments are provided in tables M, O, P, and Q of that publication.

Table A-1. Employment status of the population, including Armed Forces in the United States, by sex

(Numbers in thousands)

Employment status and sex	Not seasonally adjusted			Seasonally adjusted¹					
	Aug. 1986	July 1987	Aug. 1987	Aug. 1986	Apr. 1987	May 1987	June 1987	July 1987	Aug. 1987
TOTAL									
Noninstitutional population²	182,525	184,605	184,738	182,525	184,079	184,259	184,421	184,605	184,738
Labor force²	121,168	123,825	123,350	119,821	121,070	121,719	121,235	121,672	122,038
Participation rate³	66.4	67.1	66.8	65.6	65.8	66.1	65.7	65.9	66.1
Total employed²	113,212	116,372	116,263	111,764	113,570	114,173	113,975	114,447	114,817
Employment-population ratio⁴	62.0	63.0	62.9	61.2	61.7	62.0	61.8	62.0	62.2
Resident Armed Forces	1,697	1,720	1,736	1,697	1,735	1,726	1,718	1,720	1,736
Civilian employed	111,515	114,652	114,527	110,067	111,835	112,447	112,257	112,727	113,081
Agriculture	3,440	3,754	3,452	3,057	3,290	3,335	3,178	3,219	3,092
Nonagricultural industries	108,075	110,898	111,075	107,010	108,545	109,112	109,079	109,508	109,989
Unemployed	7,955	7,453	7,088	8,057	7,500	7,546	7,260	7,224	7,221
Unemployment rate⁵	6.6	6.0	5.7	6.7	6.2	6.2	6.0	5.9	5.9
Not in labor force	61,357	60,779	61,388	62,704	63,009	62,540	63,187	62,933	62,700
Men, 16 years and over									
Noninstitutional population²	87,460	88,534	88,598	87,460	88,271	88,361	88,442	88,534	88,598
Labor force²	68,010	69,338	69,001	66,911	67,603	67,816	67,556	67,656	67,925
Participation rate³	77.8	78.3	77.9	76.5	76.6	76.7	76.4	76.4	76.7
Total employed²	63,913	65,375	65,305	62,483	63,417	63,562	63,471	63,715	63,918
Employment-population ratio⁴	73.1	73.8	73.7	71.4	71.8	71.9	71.8	72.0	72.1
Resident Armed Forces	1,541	1,561	1,575	1,541	1,575	1,566	1,559	1,561	1,575
Civilian employed	62,372	63,814	63,730	60,942	61,842	61,996	61,912	62,154	62,343
Unemployed	4,097	3,963	3,696	4,428	4,186	4,254	4,085	3,941	4,007
Unemployment rate⁵	6.0	5.7	5.4	6.6	6.2	6.3	6.0	5.8	5.9
Women, 16 years and over									
Noninstitutional population²	95,065	96,071	96,140	95,065	95,808	95,896	95,979	96,071	96,140
Labor force²	53,157	54,488	54,350	52,910	53,467	53,903	53,679	54,016	54,113
Participation rate³	55.9	56.7	56.5	55.7	55.8	56.2	55.9	56.2	56.3
Total employed²	49,299	50,998	50,958	49,281	50,153	50,611	50,504	50,733	50,899
Employment-population ratio⁴	51.9	53.1	53.0	51.8	52.3	52.8	52.6	52.8	52.9
Resident Armed Forces	156	159	161	156	160	160	159	159	161
Civilian employed	49,143	50,839	50,797	49,125	49,993	50,451	50,345	50,574	50,738
Unemployed	3,858	3,490	3,392	3,629	3,314	3,292	3,175	3,283	3,213
Unemployment rate⁵	7.3	6.4	6.2	6.9	6.2	6.1	5.9	6.1	5.9

---

[1] The population and Armed Forces figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

[2] Includes members of the Armed Forces stationed in the United States.

[3] Labor force as a percent of the noninstitutional population.

[4] Total employment as a percent of the noninstitutional population.

[5] Unemployment as a percent of the labor force (including the resident Armed Forces).

Table A-2. Employment status of the civilian population by sex and age

(Numbers in thousands)

Employment status, sex, and age	Not seasonally adjusted			Seasonally adjusted[1]					
	Aug. 1986	July 1987	Aug. 1987	Aug. 1986	Apr. 1987	May 1987	June 1987	July 1987	Aug. 1987
TOTAL									
Civilian noninstitutional population	180,828	182,885	183,002	180,828	182,344	182,533	182,703	182,885	183,002
Civilian labor force	119,471	122,105	121,614	118,124	119,335	119,993	119,517	119,952	120,302
Participation rate	66.1	66.8	66.5	65.3	65.4	65.7	65.4	65.6	65.7
Employed	111,515	114,652	114,527	110,067	111,835	112,447	112,257	112,727	113,081
Employment-population ratio[2]	61.7	62.7	62.6	60.9	61.3	61.6	61.4	61.6	61.8
Unemployed	7,955	7,453	7,088	8,057	7,500	7,546	7,260	7,224	7,221
Unemployment rate	6.7	6.1	5.8	6.8	6.3	6.3	6.1	6.0	6.0
Men, 20 years and over									
Civilian noninstitutional population	78,634	79,625	79,668	78,634	79,387	79,474	79,536	79,625	79,668
Civilian labor force	61,689	62,645	62,516	61,219	61,976	62,156	62,057	62,116	62,053
Participation rate	78.5	78.7	78.5	77.9	78.1	78.2	78.0	78.0	77.9
Employed	58,344	59,458	59,546	57,585	58,567	58,721	58,620	58,793	58,818
Employment-population ratio[2]	74.2	74.7	74.7	73.2	73.8	73.9	73.7	73.8	73.8
Agriculture	2,355	2,556	2,416	2,185	2,411	2,441	2,307	2,343	2,254
Nonagricultural industries	55,989	56,902	57,130	55,400	56,155	56,280	56,313	56,450	56,564
Unemployed	3,345	3,187	2,970	3,634	3,409	3,436	3,437	3,323	3,235
Unemployment rate	5.4	5.1	4.8	5.9	5.5	5.5	5.5	5.4	5.2
Women, 20 years and over									
Civilian noninstitutional population	87,689	88,632	88,685	87,689	88,395	88,464	88,546	88,632	88,685
Civilian labor force	48,653	49,564	49,683	48,950	49,466	49,776	49,716	49,971	49,989
Participation rate	55.5	55.9	56.0	55.8	56.0	56.3	56.1	56.4	56.4
Employed	45,439	46,811	46,840	45,956	46,751	47,096	47,128	47,288	47,325
Employment-population ratio[2]	51.8	52.8	52.8	52.4	52.9	53.2	53.2	53.4	53.4
Agriculture	702	749	680	627	587	636	615	619	603
Nonagricultural industries	44,737	46,062	46,161	45,329	46,164	46,460	46,512	46,669	46,722
Unemployed	3,214	2,753	2,843	2,994	2,715	2,680	2,588	2,683	2,664
Unemployment rate	6.6	5.6	5.7	6.1	5.5	5.4	5.2	5.4	5.3
Both sexes, 16 to 19 years									
Civilian noninstitutional population	14,505	14,628	14,649	14,505	14,562	14,595	14,621	14,628	14,649
Civilian labor force	9,129	9,896	9,415	7,955	7,894	8,063	7,746	7,865	8,260
Participation rate	62.9	67.6	64.3	54.8	54.2	55.2	53.0	53.8	56.4
Employed	7,732	8,383	8,141	6,526	6,518	6,633	6,511	6,647	6,939
Employment-population ratio[2]	53.3	57.3	55.6	45.0	44.8	45.4	44.5	45.4	47.4
Agriculture	383	448	356	250	292	261	257	258	236
Nonagricultural industries	7,349	7,936	7,785	6,276	6,226	6,372	6,254	6,389	6,703
Unemployed	1,397	1,513	1,274	1,429	1,376	1,430	1,235	1,218	1,321
Unemployment rate	15.3	15.3	13.5	18.0	17.4	17.7	15.9	15.5	16.0

---

[1] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

[2] Civilian employment as a percent of the civilian noninstitutional population.

Table A-3. Employment status of the civilian population by race, sex, age, and Hispanic origin

(Numbers in thousands)

Employment status, race, sex, age, and Hispanic origin	Not seasonally adjusted			Seasonally adjusted[1]					
	Aug. 1986	July 1987	Aug. 1987	Aug. 1986	Apr. 1987	May 1987	June 1987	July 1987	Aug. 1987
WHITE									
Civilian noninstitutional population	155,604	157,058	157,134	155,604	156,676	156,811	156,910	157,058	157,134
Civilian labor force	103,214	104,987	104,631	102,122	102,896	103,573	103,106	103,272	103,474
Participation rate	66.3	66.8	66.6	65.6	65.7	66.1	65.7	65.8	65.9
Employed	97,410	99,609	99,482	96,177	97,340	98,050	97,716	97,958	98,259
Employment-population ratio[2]	62.6	63.4	63.3	61.8	62.1	62.5	62.3	62.4	62.5
Unemployed	5,805	5,378	5,149	5,945	5,556	5,524	5,390	5,314	5,215
Unemployment rate	5.6	5.1	4.9	5.8	5.4	5.3	5.2	5.1	5.0
Men, 20 years and over									
Civilian labor force	53,996	54,625	54,558	53,583	54,051	54,314	54,213	54,214	54,164
Participation rate	78.8	78.9	78.8	78.2	78.3	78.6	78.4	78.3	78.2
Employed	51,531	52,250	52,335	50,877	51,462	51,755	51,581	51,682	51,714
Employment-population ratio[2]	75.2	75.5	75.6	74.3	74.6	74.9	74.6	74.7	74.7
Unemployed	2,466	2,375	2,224	2,706	2,589	2,558	2,632	2,532	2,449
Unemployment rate	4.6	4.3	4.1	5.1	4.8	4.7	4.9	4.7	4.5
Women, 20 years and over									
Civilian labor force	41,320	41,927	42,061	41,640	41,982	42,259	42,159	42,280	42,418
Participation rate	54.9	55.3	55.4	55.4	55.5	55.8	55.6	55.7	55.9
Employed	38,984	39,975	40,049	39,464	40,041	40,363	40,318	40,379	40,535
Employment-population ratio[2]	51.8	52.7	52.7	52.5	52.9	53.2	53.2	53.2	53.4
Unemployed	2,336	1,951	2,012	2,176	1,941	1,895	1,841	1,902	1,882
Unemployment rate	5.7	4.7	4.8	5.2	4.6	4.5	4.4	4.5	4.4
Both sexes, 16 to 19 years									
Civilian labor force	7,898	8,436	8,012	6,899	6,861	7,021	6,734	6,778	7,033
Participation rate	66.5	70.5	67.0	58.1	57.4	58.7	56.3	56.6	58.8
Employed	6,895	7,384	7,098	5,834	5,837	5,951	5,817	5,898	6,049
Employment-population ratio[2]	58.0	61.7	59.4	49.1	48.9	49.8	48.6	49.3	50.6
Unemployed	1,003	1,051	913	1,065	1,024	1,070	917	880	984
Unemployment rate	12.7	12.5	11.4	15.4	14.9	15.2	13.6	13.0	14.0
Men	13.4	12.1	12.3	16.6	16.7	17.3	14.5	13.0	15.4
Women	12.0	12.8	10.4	14.2	13.1	13.1	12.7	13.0	12.5
BLACK									
Civilian noninstitutional population	20,028	20,373	20,396	20,028	20,279	20,312	20,341	20,373	20,396
Civilian labor force	12,767	13,468	13,393	12,553	12,743	12,860	12,863	13,047	13,194
Participation rate	63.7	66.1	65.7	62.7	62.8	63.3	63.2	64.0	64.7
Employed	10,878	11,645	11,721	10,716	11,090	11,080	11,223	11,401	11,563
Employment-population ratio[2]	54.3	57.2	57.5	53.5	54.7	54.6	55.2	56.0	56.7
Unemployed	1,889	1,823	1,671	1,837	1,653	1,779	1,640	1,647	1,630
Unemployment rate	14.8	13.5	12.5	14.6	13.0	13.8	12.7	12.6	12.4
Men, 20 years and over									
Civilian labor force	5,923	6,159	6,121	5,885	5,980	6,033	6,001	6,089	6,079
Participation rate	74.7	76.3	75.8	74.2	74.4	75.0	74.5	75.4	75.2
Employed	5,166	5,463	5,491	5,110	5,328	5,279	5,311	5,404	5,431
Employment-population ratio[2]	65.2	67.7	68.0	64.5	66.3	65.6	65.9	66.9	67.2
Unemployed	756	696	630	775	652	754	690	686	647
Unemployment rate	12.8	11.3	10.3	13.2	10.9	12.5	11.5	11.3	10.7
Women, 20 years and over									
Civilian labor force	5,849	6,104	6,118	5,841	5,918	5,970	6,017	6,125	6,120
Participation rate	58.7	60.2	60.3	58.6	58.7	59.1	59.5	60.4	60.3
Employed	5,067	5,388	5,379	5,112	5,238	5,278	5,349	5,426	5,428
Employment-population ratio[2]	50.8	53.2	53.0	51.1	51.9	52.2	52.9	53.5	53.5
Unemployed	782	716	739	729	680	691	669	699	692
Unemployment rate	13.4	11.7	12.1	12.5	11.5	11.6	11.1	11.4	11.3
Both sexes, 16 to 19 years									
Civilian labor force	996	1,205	1,154	827	845	857	844	833	995
Participation rate	46.7	55.6	53.2	38.8	39.2	39.7	39.0	38.4	45.9
Employed	645	794	852	494	524	523	563	571	704
Employment-population ratio[2]	30.2	36.6	39.3	23.1	24.3	24.2	26.0	26.3	32.5
Unemployed	351	411	302	333	321	334	281	262	291
Unemployment rate	35.3	34.1	26.2	40.3	38.0	39.0	33.3	31.5	29.2
Men	32.9	33.9	28.1	38.8	39.3	40.3	31.5	31.5	32.6
Women	37.9	34.5	24.0	41.9	36.5	37.6	35.1	31.4	25.3
HISPANIC ORIGIN									
Civilian noninstitutional population	12,397	12,887	12,925	12,397	12,770	12,809	12,848	12,887	12,925
Civilian labor force	8,270	8,583	8,688	8,130	8,484	8,584	8,452	8,411	8,544
Participation rate	66.7	66.6	67.2	65.6	66.4	67.0	65.8	65.3	66.1
Employed	7,393	7,883	8,013	7,248	7,701	7,818	7,735	7,744	7,864
Employment-population ratio[2]	59.6	61.2	62.0	58.5	60.3	61.0	60.2	60.1	60.8
Unemployed	877	700	675	882	783	765	717	667	680
Unemployment rate	10.6	8.2	7.8	10.8	9.2	8.9	8.5	7.9	8.0

---

[1] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

[2] Civilian employment as a percent of the civilian noninstitutional population.

NOTE: Detail for the above race and Hispanic-origin groups will not sum to totals because data for the "other races" group are not presented and Hispanics are included in both the white and black population groups.

Table A-4. Selected employment indicators

(Numbers in thousands)

Category	Not seasonally adjusted			Seasonally adjusted					
	Aug. 1986	July 1987	Aug. 1987	Aug. 1986	Apr. 1987	May 1987	June 1987	July 1987	Aug. 1987
CHARACTERISTIC									
Civilian employed, 16 years and over	111,515	114,652	114,527	110,067	111,815	112,447	112,257	112,721	[illegible]
Married men, spouse present	39,994	40,402	40,542	39,735	39,967	40,029	40,057	40,261	[illegible]
Married women, spouse present	26,834	27,744	27,660	27,380	28,215	28,495	28,458	28,476	[illegible]
Women who maintain families	5,791	6,031	6,059	5,832	5,977	5,921	5,919	6,013	[illegible]
MAJOR INDUSTRY AND CLASS OF WORKER									
Agriculture:									
Wage and salary workers	1,727	1,967	1,781	1,509	1,589	1,695	1,614	1,619	1,546
Self-employed workers	1,496	1,572	1,472	1,387	1,505	1,442	1,386	1,429	1,343
Unpaid family workers	217	215	198	174	175	170	165	154	159
Nonagricultural industries:									
Wage and salary workers	99,672	102,350	102,422	98,586	100,112	100,834	100,420	100,858	101,336
Government	15,820	16,355	16,140	16,446	16,484	16,710	16,956	16,951	16,760
Private industries	83,853	85,996	86,281	82,140	83,628	84,124	83,464	83,907	84,576
Private households	1,357	1,353	1,273	1,247	1,266	1,266	1,146	1,224	1,172
Other industries	82,496	84,643	85,008	80,893	82,362	82,858	82,318	82,683	83,407
Self-employed workers	8,126	8,279	8,397	7,956	8,117	8,142	8,328	8,205	8,216
Unpaid family workers	277	269	256	271	268	275	274	268	250
PERSONS AT WORK PART TIME[1]									
All industries:									
Part time for economic reasons	5,927	6,219	5,694	5,471	5,391	5,202	5,184	5,508	5,262
Slack work	2,331	2,387	2,417	2,417	2,322	2,223	2,317	2,456	2,515
Could only find part-time work	3,199	3,452	2,900	2,741	2,746	2,665	2,579	2,722	2,494
Voluntary part time	11,036	11,826	11,590	13,981	13,862	14,573	15,054	14,422	14,634
Nonagricultural industries:									
Part time for economic reasons	5,669	5,848	5,373	5,269	5,110	5,029	4,918	5,235	4,998
Slack work	2,192	2,203	2,207	2,283	2,137	2,071	2,155	2,295	2,306
Could only find part-time work	3,096	3,290	2,805	2,678	2,662	2,594	2,477	2,634	2,433
Voluntary part time	10,645	11,324	11,136	13,606	13,399	14,069	14,485	13,946	14,168

---

[1] Excludes persons "with a job but not at work" during the survey period for such reasons as vacation, illness, or industrial dispute.

Table A-5. Range of unemployment measures based on varying definitions of unemployment and the labor force, seasonally adjusted

(Percent)

Measure	Quarterly averages					Monthly data		
	1986			1987		1987		
	II	III	IV	I	II	June	July	Aug.
U-1 Persons unemployed 15 weeks or longer as a percent of the civilian labor force	1.9	1.9	1.8	1.8	1.7	1.7	1.6	1.6
U-2 Job losers as a percent of the civilian labor force	3.5	3.4	3.3	3.3	3.0	3.0	2.9	2.8
U-3 Unemployed persons 25 years and over as a percent of the civilian labor force	5.5	5.4	5.4	5.1	4.7	4.6	4.7	4.7
U-4 Unemployed full-time jobseekers as a percent of the full-time civilian labor force	6.8	6.6	6.5	6.3	5.9	5.9	5.7	5.6
U-5a Total unemployed as a percent of the labor force, including the resident Armed Forces	7.0	6.8	6.8	6.6	6.1	6.0	5.9	5.9
U-5b Total unemployed as a percent of the civilian labor force	7.1	6.9	6.9	6.7	6.2	6.1	6.0	6.0
U-6 Total full-time jobseekers plus ½ part-time jobseekers plus ½ total on part time for economic reasons as a percent of the civilian labor force less ½ of the part-time labor force	9.4	9.3	9.2	9.0	8.4	8.1	8.3	8.2
U-7 Total full-time jobseekers plus ½ part-time jobseekers plus ½ total on part time for economic reasons plus discouraged workers as a percent of the civilian labor force plus discouraged workers less ½ of the part-time labor force	10.5	10.2	10.2	10.0	[illegible]	[illegible]	[illegible]	[illegible]

N.A. = not available

Table A-6. Selected unemployment indicators, seasonally adjusted

Category	Number of unemployed persons (in thousands)			Unemployment rates¹					
	Aug. 1986	July 1987	Aug. 1987	Aug. 1986	Apr. 1987	May 1987	June 1987	July 1987	Aug. 1987
CHARACTERISTIC									
Total, 16 years and over	8,057	7,224	7,221	6.8	6.3	6.3	6.1	6.0	6.0
Men, 16 years and over	4,428	3,941	4,007	6.8	6.3	6.4	6.2	6.0	6.0
Men, 20 years and over	3,634	3,323	3,235	5.9	5.5	5.5	5.5	5.4	5.2
Women, 16 years and over	3,629	3,283	3,213	6.9	6.2	6.1	5.9	6.1	6.0
Women, 20 years and over	2,994	2,683	2,664	6.1	5.5	5.4	5.2	5.4	5.3
Both sexes, 16 to 19 years	1,429	1,218	1,321	18.0	17.4	17.7	15.9	15.5	16.0
Married men, spouse present	1,729	1,608	1,526	4.2	4.1	3.9	4.0	3.8	3.7
Married women, spouse present	1,478	1,243	1,268	5.1	4.4	4.1	4.0	4.2	4.3
Women who maintain families	653	620	608	10.1	9.3	9.6	9.7	9.4	9.0
Full-time workers	6,518	5,837	5,783	6.4	5.9	5.9	5.9	5.7	5.6
Part-time workers	1,561	1,358	1,433	9.3	8.6	8.7	6.9	7.9	8.2
Labor force time lost²	--	--	--	7.7	7.3	7.2	7.1	6.9	6.8
INDUSTRY									
Nonagricultural private wage and salary workers	6,120	5,480	5,339	6.9	6.2	6.3	6.2	6.1	5.9
Mining	156	67	78	16.6	11.1	12.9	10.8	7.8	8.9
Construction	761	670	706	12.4	11.9	12.1	11.6	10.7	11.2
Manufacturing	1,515	1,307	1,205	6.9	6.2	6.4	5.6	6.0	5.5
Durable goods	904	789	714	6.8	6.2	6.3	5.3	6.1	5.5
Nondurable goods	611	518	491	6.9	6.2	6.6	6.0	5.9	5.5
Transportation and public utilities	293	280	266	4.8	4.8	4.4	5.0	4.4	4.3
Wholesale and retail trade	1,684	1,546	1,615	7.5	7.0	6.9	7.2	6.8	7.0
Finance and service industries	1,711	1,609	1,470	5.6	4.7	4.8	4.8	5.1	4.6
Government workers	554	600	673	3.3	3.6	3.5	3.4	3.4	3.9
Agricultural wage and salary workers	251	207	191	13.3	9.0	8.7	8.8	11.3	10.8

¹ Unemployment as a percent of the civilian labor force.

² Aggregate hours lost by the unemployed and persons on part time for economic reasons as a percent of potentially available labor force hours.

Table A-7. Duration of unemployment

(Numbers in thousands)

Weeks of unemployment	Not seasonally adjusted			Seasonally adjusted					
	Aug. 1986	July 1987	Aug. 1987	Aug. 1986	Apr. 1987	May 1987	June 1987	July 1987	Aug. 1987
DURATION									
Less than 5 weeks	3,348	3,415	3,101	3,436	3,143	3,349	3,085	3,168	3,197
5 to 14 weeks	2,576	2,276	2,305	2,407	2,232	2,118	2,114	2,141	2,170
15 weeks and over	2,031	1,762	1,682	2,272	2,075	2,101	2,055	1,907	1,884
15 to 26 weeks	862	787	642	1,068	1,025	1,003	998	945	814
27 weeks and over	1,170	975	1,040	1,204	1,049	1,098	1,057	962	1,070
Average (mean) duration, in weeks	15.3	13.4	14.2	15.6	14.9	14.9	14.8	14.8	14.3
Median duration, in weeks	7.1	5.9	6.4	7.1	7.0	6.5	6.7	6.7	6.4
PERCENT DISTRIBUTION									
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than 5 weeks	42.1	45.8	43.8	42.3	42.2	44.3	42.5	43.9	44.1
5 to 14 weeks	32.4	30.5	32.5	29.7	30.0	28.0	29.1	29.7	29.9
15 weeks and over	25.5	23.6	23.7	28.0	27.9	27.8	28.3	26.4	26.0
15 to 26 weeks	10.8	10.6	9.1	13.2	13.8	13.2	13.8	13.1	11.2
27 weeks and over	14.7	13.1	14.7	14.8	14.1	14.5	14.6	13.3	14.8

Table A-8. Reason for unemployment

Numbers in thousands

Reason	Not seasonally adjusted			Seasonally adjusted					
	Aug. 1986	July 1987	Aug. 1987	Aug. 1986	Apr. 1987	May 1987	June 1987	July 1987	Aug. 1987
NUMBER OF UNEMPLOYED									
Job losers	3,626	3,385	3,145	3,824	3,732	3,611	3,563	3,522	3,339
On layoff	886	839	730	1,017	958	906	901	918	850
Other job losers	2,740	2,546	2,415	2,807	2,774	2,705	2,664	2,604	2,489
Job leavers	1,043	1,060	1,062	998	923	906	949	1,007	1,006
Reentrants	2,196	1,911	1,991	2,199	1,940	2,018	1,969	1,913	1,997
New entrants	1,093	1,089	890	1,016	911	1,018	798	801	829
PERCENT DISTRIBUTION									
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Job losers	45.5	45.5	44.4	47.6	49.7	47.8	49.0	48.6	46.6
On layoff	11.1	11.3	10.3	12.7	12.8	12.0	12.4	12.7	11.9
Other job losers	34.4	34.2	34.1	35.0	37.0	35.8	36.6	36.0	34.7
Job leavers	13.1	14.3	15.0	12.3	12.3	12.0	13.0	13.9	14.0
Reentrants	27.6	25.6	28.1	27.4	25.8	26.7	27.0	26.4	27.9
New entrants	13.7	14.6	12.6	12.6	12.1	13.5	11.0	11.1	11.6
UNEMPLOYED AS A PERCENT OF THE CIVILIAN LABOR FORCE									
Job losers	3.0	2.8	2.6	3.2	3.1	3.0	3.0	2.9	2.8
Job leavers	.9	.9	.9	.8	.8	.8	.8	.8	.8
Reentrants	1.8	1.6	1.6	1.9	1.6	1.7	1.6	1.6	1.7
New entrants	.9	.9	.7	.9	.8	.8	.7	.7	.7

Table A-9. Unemployed persons by sex and age, seasonally adjusted

Sex and age	Number of unemployed persons (in thousands)			Unemployment rates[1]					
	Aug. 1986	July 1987	Aug. 1987	Aug. 1986	Apr. 1987	May 1987	June 1987	July 1987	Aug. 1987
Total, 16 years and over	8,057	7,224	7,221	6.8	6.3	6.3	6.1	6.0	6.0
16 to 24 years	3,001	2,686	2,685	12.9	12.6	12.6	12.2	11.7	11.6
16 to 19 years	1,429	1,218	1,321	18.0	17.4	17.7	15.9	15.5	16.0
16 to 17 years	641	573	636	19.8	19.2	21.4	18.8	17.1	18.0
18 to 19 years	787	623	691	16.8	16.3	15.0	13.7	13.9	14.7
20 to 24 years	1,572	1,468	1,364	10.3	10.1	9.8	10.2	9.8	9.1
25 years and over	5,087	4,532	4,564	5.4	4.8	4.8	4.6	4.7	4.7
25 to 54 years	4,525	4,090	4,072	5.7	5.0	5.0	4.9	5.0	5.0
55 years and over	561	457	479	3.7	3.4	3.7	3.2	3.1	3.2
Men, 16 years and over	4,428	3,941	4,007	6.8	6.3	6.4	6.2	6.0	6.0
16 to 24 years	1,625	1,406	1,498	13.3	13.2	13.4	12.6	11.9	12.4
16 to 19 years	794	618	772	19.1	19.2	20.0	16.4	15.5	18.0
16 to 17 years	350	285	374	20.9	21.5	23.2	18.7	16.6	20.6
18 to 19 years	441	327	400	18.0	17.5	17.7	14.4	13.8	16.3
20 to 24 years	831	788	726	10.3	10.1	10.0	10.7	10.0	9.3
25 years and over	2,835	2,530	2,543	5.3	4.8	4.9	4.7	4.7	4.7
25 to 54 years	2,471	2,244	2,212	5.6	5.0	5.1	5.0	4.9	4.9
55 years and over	356	299	308	4.1	3.7	4.1	3.4	3.4	3.4
Women, 16 years and over	3,629	3,283	3,213	6.9	6.2	6.1	5.9	6.1	6.0
16 to 24 years	1,376	1,280	1,187	12.4	12.0	11.7	11.7	11.6	10.7
16 to 19 years	635	600	549	16.7	15.6	15.4	15.4	15.4	13.9
16 to 17 years	291	288	262	18.7	16.7	19.6	18.9	17.7	15.5
18 to 19 years	344	316	291	15.4	15.1	12.4	13.0	14.0	12.9
20 to 24 years	741	680	638	10.2	10.1	9.7	9.1	9.5	8.9
25 years and over	2,252	2,002	2,022	5.4	4.7	4.7	4.4	4.7	4.7
25 to 54 years	2,054	1,846	1,839	5.8	5.0	4.9	4.7	5.0	5.0
55 years and over	205	158	179	3.1	3.0	3.0	2.8	2.6	2.9

[1] Unemployment as a percent of the civilian labor force.

Table A-10. Employment status of black and other workers

Numbers in thousands

Employment status	Not seasonally adjusted			Seasonally adjusted[1]					
	Aug. 1986	July 1987	Aug. 1987	Aug. 1986	Apr. 1987	May 1987	June 1987	July 1987	Aug. 1987
Civilian noninstitutional population	25,224	25,826	25,868	25,224	25,667	25,723	25,773	25,826	25,868
Civilian labor force	16,256	17,118	16,984	15,957	16,394	16,464	16,439	16,632	16,705
Participation rate	64.4	66.3	65.7	63.3	63.9	64.0	63.8	64.4	64.6
Employed	14,105	15,043	15,045	13,861	14,468	14,454	14,566	14,750	14,812
Employment-population ratio[2]	55.9	58.2	58.2	55.0	56.4	56.2	56.5	57.1	57.3
Unemployed	2,151	2,076	1,939	2,096	1,925	2,011	1,873	1,882	1,893
Unemployment rate	13.2	12.1	11.4	13.1	11.7	12.2	11.4	11.3	11.3
Not in labor force	8,968	8,708	8,884	9,267	9,273	9,259	9,334	9,194	9,163

[1] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

[2] Civilian employment as a percent of the civilian noninstitutional population.

Table A-11. Occupational status of the employed and unemployed, not seasonally adjusted

Numbers in thousands

Occupation	Civilian employed		Unemployed		Unemployment rate	
	Aug. 1986	Aug. 1987	Aug. 1986	Aug. 1987	Aug. 1986	Aug. 1987
Total, 16 years and over[1]	111,515	114,527	7,955	7,088	6.7	5.8
Managerial and professional specialty	26,183	27,750	731	672	2.7	2.4
Executive, administrative, and managerial	12,753	13,791	319	312	2.4	2.2
Professional specialty	13,431	13,958	411	360	3.0	2.5
Technical, sales, and administrative support	34,784	35,285	1,742	1,622	4.8	4.4
Technicians and related support	3,387	3,470	115	112	3.3	3.1
Sales occupations	13,446	13,708	763	696	5.4	4.8
Administrative support, including clerical	17,952	18,107	864	813	4.6	4.3
Service occupations	14,935	15,277	1,335	1,257	8.2	7.6
Private household	1,007	956	78	63	7.2	6.2
Protective service	1,829	1,932	60	75	3.2	3.7
Service, except private household and protective	12,098	12,389	1,196	1,119	9.0	8.3
Precision production, craft, and repair	13,903	14,073	892	770	6.0	5.2
Mechanics and repairers	4,444	4,627	214	188	4.6	3.9
Construction trades	5,329	5,323	396	360	6.9	6.3
Other precision production, craft, and repair	4,130	4,122	282	222	6.4	5.1
Operators, fabricators, and laborers	17,809	18,161	1,874	1,609	9.5	8.1
Machine operators, assemblers, and inspectors	8,155	8,346	877	709	9.7	7.8
Transportation and material moving occupations	4,579	4,750	340	306	6.9	6.1
Handlers, equipment cleaners, helpers, and laborers	5,075	5,065	657	594	11.5	10.5
Construction laborers	912	935	142	120	13.5	11.3
Other handlers, equipment cleaners, helpers, and laborers	4,162	4,130	514	474	11.0	10.3
Farming, forestry, and fishing	3,901	3,981	249	242	6.0	5.7

[1] Persons with no previous work experience and those whose last job was in the Armed Forces are included in the unemployed total.

Table A-12. Employment status of male Vietnam-era veterans and nonveterans by age, not seasonally adjusted

(Numbers in thousands)

Veteran status and age	Civilian noninstitutional population		Civilian labor force							
			Total		Employed		Unemployed			
							Number		Percent of labor force	
	Aug. 1986	Aug. 1987	Aug. 1986	Aug. 1987	Aug. 1986	Aug. 1987	Aug. 1986	Aug. 1987	Aug. 1986	Aug. 1987
VIETNAM-ERA VETERANS										
Total, 30 years and over	7,760	7,847	7,166	7,241	6,884	6,934	282	307	3.9	4.2
30 to 44 years	6,370	6,184	6,063	5,904	5,806	5,655	257	249	4.2	4.2
30 to 34 years	1,120	895	1,044	839	984	777	60	62	5.7	7.4
35 to 39 years	3,009	2,552	2,863	2,428	2,741	2,310	122	118	4.3	4.9
40 to 44 years	2,241	2,737	2,156	2,637	2,081	2,568	75	69	3.5	2.6
45 years and over	1,390	1,663	1,103	1,337	1,078	1,279	25	58	2.3	4.3
NONVETERANS										
Total, 30 to 44 years	18,529	19,585	17,579	18,601	16,672	17,788	907	813	5.2	4.4
30 to 34 years	8,600	8,910	8,183	8,549	7,749	8,132	434	417	5.3	4.9
35 to 39 years	5,765	6,252	5,476	5,921	5,175	5,692	301	229	5.5	3.9
40 to 44 years	4,164	4,423	3,920	4,131	3,748	3,964	172	167	4.4	4.0

NOTE: Male Vietnam-era veterans are men who served in the Armed Forces between August 5, 1964 and May 7, 1975. Nonveterans are men who have never served in the Armed Forces. published data are limited to those 30 to 44 years of age, the group that most closely corresponds to the bulk of the Vietnam-era veteran population.

Table A-13. Employment status of the civilian population for eleven large States

(Numbers in thousands)

State and employment status	Not seasonally adjusted[1]			Seasonally adjusted[2]					
	Aug. 1986	July 1987	Aug. 1987	Aug. 1986	Apr. 1987	May 1987	June 1987	July 1987	Aug. 1987
California									
Civilian noninstitutional population	20,170	20,592	20,624	20,170	20,477	20,516	20,553	20,592	20,624
Civilian labor force	13,541	13,981	13,891	13,423	13,761	13,917	13,742	13,819	13,775
Employed	12,639	13,142	13,141	12,536	12,959	13,070	12,989	13,064	13,036
Unemployed	902	839	751	887	802	847	753	755	739
Unemployment rate	6.7	6.0	5.4	6.6	5.8	6.1	5.5	5.5	5.4
Florida									
Civilian noninstitutional population	9,202	9,441	9,460	9,202	9,376	9,398	9,419	9,441	9,460
Civilian labor force	5,711	5,985	5,925	5,630	5,837	5,881	5,840	5,899	5,851
Employed	5,373	5,630	5,589	5,299	5,515	5,562	5,546	5,587	5,519
Unemployed	338	356	336	331	322	319	294	312	332
Unemployment rate	5.9	5.9	5.7	5.9	5.5	5.4	5.0	5.3	5.7
Illinois									
Civilian noninstitutional population	8,661	8,687	8,686	8,661	8,680	8,682	8,684	8,687	8,686
Civilian labor force	5,751	5,874	5,865	5,713	5,652	5,680	5,727	5,778	5,819
Employed	5,298	5,455	5,466	5,251	5,186	5,201	5,297	5,356	5,409
Unemployed	453	419	399	462	466	479	430	422	410
Unemployment rate	7.9	7.1	6.8	8.1	8.2	8.4	7.5	7.3	7.0
Massachusetts									
Civilian noninstitutional population	4,554	4,573	4,573	4,554	4,568	4,570	4,571	4,573	4,573
Civilian labor force	3,137	3,132	3,153	3,081	3,070	3,069	3,114	3,069	3,097
Employed	3,021	3,052	3,065	2,961	2,947	2,954	3,015	2,993	3,005
Unemployed	116	80	89	120	123	115	99	76	92
Unemployment rate	3.7	2.6	2.8	3.9	4.0	3.7	3.2	2.5	3.0
Michigan									
Civilian noninstitutional population	6,868	6,931	6,934	6,868	6,914	6,920	6,925	6,931	6,934
Civilian labor force	4,419	4,599	4,686	4,372	4,466	4,486	4,513	4,503	4,638
Employed	4,071	4,192	4,296	4,004	4,081	4,124	4,124	4,129	4,231
Unemployed	348	407	389	368	385	362	389	374	407
Unemployment rate	7.9	8.8	8.3	8.4	8.6	8.1	8.6	8.3	8.8
New Jersey									
Civilian noninstitutional population	5,929	5,987	5,990	5,929	5,971	5,977	5,981	5,987	5,990
Civilian labor force	3,951	4,025	4,022	3,916	3,946	4,003	3,977	3,930	3,986
Employed	3,775	3,843	3,867	3,724	3,791	3,836	3,809	3,771	3,815
Unemployed	176	181	155	192	155	167	168	159	171
Unemployment rate	4.5	4.5	3.9	4.9	3.9	4.2	4.2	4.0	4.3
New York									
Civilian noninstitutional population	13,737	13,782	13,781	13,737	13,769	13,774	13,777	13,782	13,781
Civilian labor force	8,530	8,674	8,669	8,390	8,473	8,491	8,535	8,481	8,526
Employed	8,030	8,280	8,292	7,886	8,062	8,082	8,145	8,106	8,145
Unemployed	501	394	376	504	411	409	390	375	381
Unemployment rate	5.9	4.5	4.3	6.0	4.9	4.8	4.6	4.4	4.5
North Carolina									
Civilian noninstitutional population	4,767	4,843	4,848	4,767	4,822	4,829	4,836	4,843	4,848
Civilian labor force	3,252	3,389	3,351	3,207	3,267	3,240	3,292	3,322	3,306
Employed	3,085	3,229	3,211	3,039	3,112	3,101	3,143	3,171	3,165
Unemployed	167	160	140	168	155	139	149	151	141
Unemployment rate	5.1	4.7	4.2	5.2	4.7	4.3	4.5	4.5	4.3
Ohio									
Civilian noninstitutional population	8,109	8,136	8,136	8,109	8,128	8,131	8,133	8,136	8,136
Civilian labor force	5,261	5,325	5,272	5,185	5,223	5,294	5,237	5,240	5,205
Employed	4,838	4,967	4,908	4,763	4,846	4,878	4,859	4,868	4,841
Unemployed	423	358	364	422	377	416	378	372	364
Unemployment rate	8.0	6.7	6.9	8.1	7.2	7.9	7.2	7.1	7.0
Pennsylvania									
Civilian noninstitutional population	9,243	9,283	9,283	9,243	9,272	9,276	9,279	9,283	9,283
Civilian labor force	5,790	5,787	5,829	5,659	5,545	5,621	5,630	5,616	5,697
Employed	5,423	5,453	5,526	5,284	5,238	5,319	5,310	5,295	5,383
Unemployed	366	335	303	375	307	302	320	321	314
Unemployment rate	6.3	5.8	5.2	6.6	5.5	5.4	5.7	5.7	5.5
Texas									
Civilian noninstitutional population	12,016	12,231	12,246	12,016	12,172	12,192	12,211	12,231	12,246
Civilian labor force	8,187	8,636	8,590	8,142	8,267	8,511	8,372	8,456	8,546
Employed	7,441	7,882	7,880	7,390	7,552	7,778	7,656	7,753	7,828
Unemployed	745	754	710	752	715	733	716	703	718
Unemployment rate	9.1	8.7	8.3	9.2	8.6	8.6	8.6	8.3	8.4

---

[1] These are the official Bureau of Labor Statistics' estimates used in the administration of Federal fund allocation programs.

[2] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and the seasonally adjusted columns.

Table B-1. Employees on nonagricultural payrolls by industry

(In thousands)

Industry	Not seasonally adjusted				Seasonally adjusted					
	Aug. 1986	June 1987	July 1987p	Aug. 1987p	Aug. 1986	Apr. 1987	May 1987	June 1987	July 1987p	Aug. 1987p
Total	99,641	102,704	101,934	102,148	99,772	101,598	101,708	101,818	102,114	102,270
Total private	83,967	85,610	85,734	86,076	83,125	84,560	84,677	84,787	85,089	85,196
Goods-producing	25,096	25,088	25,084	25,319	24,639	24,759	24,752	24,761	24,857	24,857
Mining	753	741	748	753	748	729	735	738	743	749
Oil and gas extraction	426.7	420.7	427.3	432.0	428	416	420	425	429	433
Construction	5,301	5,208	5,313	5,368	4,946	5,019	4,999	5,008	5,008	5,007
General building contractors	1,380.9	1,312.0	1,339.1	1,346.9	1,295	1,272	1,267	1,266	1,263	1,264
Manufacturing	19,042	19,139	19,023	19,198	18,945	19,011	19,018	19,015	19,106	19,101
Production workers	12,925	13,053	12,915	13,090	12,857	12,939	12,946	12,958	13,021	13,021
Durable goods	11,198	11,253	11,141	11,211	11,206	11,175	11,175	11,176	11,195	11,219
Production workers	7,373	7,479	7,352	7,430	7,399	7,406	7,409	7,421	7,426	7,457
Lumber and wood products	737.0	753.1	759.2	761.7	712	736	738	735	740	736
Furniture and fixtures	497.2	509.4	505.8	517.6	499	504	509	510	519	520
Stone, clay, and glass products	598.4	595.5	592.6	598.6	584	586	584	582	582	586
Primary metal industries	734.6	753.4	741.1	750.3	735	743	742	746	749	751
Blast furnaces and basic steel products	265.4	278.0	277.3	278.9	265	272	272	275	276	278
Fabricated metal products	1,422.0	1,430.8	1,408.9	1,421.4	1,423	1,423	1,420	1,424	1,425	1,423
Machinery, except electrical	2,038.3	2,036.5	2,023.7	2,028.6	2,051	2,022	2,025	2,028	2,032	2,041
Electrical and electronic equipment	2,123.4	2,088.3	2,078.3	2,089.1	2,123	2,092	2,087	2,080	2,087	2,089
Transportation equipment	1,979.3	2,018.0	1,973.6	1,975.6	2,016	2,011	2,011	2,010	1,994	2,012
Motor vehicles and equipment	831.5	850.2	802.8	804.8	861	847	843	842	813	833
Instruments and related products	704.5	696.4	695.5	695.6	703	694	693	693	696	694
Miscellaneous manufacturing	363.5	371.2	362.0	372.4	360	364	366	368	371	369
Nondurable goods	7,844	7,886	7,882	7,987	7,739	7,836	7,843	7,839	7,911	7,882
Production workers	5,552	5,574	5,563	5,660	5,458	5,533	5,537	5,537	5,597	5,564
Food and kindred products	1,705.6	1,638.5	1,683.9	1,727.2	1,616	1,642	1,633	1,634	1,646	1,637
Tobacco manufactures	58.1	53.4	53.6	56.2	58	56	57	57	58	56
Textile mill products	710.7	732.5	723.4	736.8	707	724	727	729	737	733
Apparel and other textile products	1,103.1	1,120.5	1,092.1	1,111.5	1,102	1,104	1,107	1,108	1,131	1,110
Paper and allied products	674.8	683.2	677.8	678.8	671	677	677	676	676	675
Printing and publishing	1,457.4	1,499.7	1,498.7	1,502.6	1,462	1,493	1,497	1,498	1,503	1,507
Chemicals and allied products	1,026.7	1,022.6	1,032.0	1,034.5	1,021	1,018	1,022	1,014	1,026	1,029
Petroleum and coal products	171.0	167.2	167.0	168.1	168	164	164	164	163	165
Rubber and miscellaneous plastics products	786.0	816.6	806.6	816.5	786	809	809	810	816	817
Leather and leather products	150.4	151.5	147.1	155.2	148	149	150	149	155	153
Service-producing	74,545	77,616	76,850	76,829	75,133	76,839	76,956	77,057	77,257	77,413
Transportation and public utilities	5,211	5,391	5,367	5,385	5,202	5,348	5,344	5,350	5,360	5,378
Transportation	3,027	3,156	3,118	3,135	3,035	3,124	3,120	3,128	3,131	3,146
Communication and public utilities	2,184	2,235	2,249	2,250	2,167	2,224	2,224	2,222	2,229	2,232
Wholesale trade	5,766	5,810	5,825	5,829	5,736	5,772	5,775	5,781	5,796	5,798
Durable goods	3,398	3,422	3,434	3,437	3,382	3,397	3,401	3,405	3,417	3,420
Nondurable goods	2,368	2,388	2,391	2,392	2,354	2,375	2,374	2,376	2,379	2,378
Retail trade	18,031	18,372	18,344	18,376	17,913	18,197	18,205	18,226	18,271	18,248
General merchandise stores	2,323.0	2,334.8	2,348.7	2,357.6	2,371	2,385	2,390	2,387	2,404	2,406
Food stores	2,887.7	2,963.3	2,965.2	2,958.0	2,889	2,953	2,956	2,960	2,959	2,958
Automotive dealers and service stations	1,973.2	2,004.5	2,007.5	2,010.2	1,949	1,978	1,978	1,983	1,984	1,986
Eating and drinking places	6,089.2	6,179.0	6,153.1	6,179.0	5,904	5,962	5,976	5,982	5,986	5,993
Finance, insurance, and real estate	6,428	6,649	6,698	6,710	6,351	6,558	6,576	6,586	6,607	6,630
Finance	3,208	3,303	3,323	3,324	3,183	3,272	3,276	3,280	3,290	3,298
Insurance	1,969	2,043	2,054	2,060	1,961	2,032	2,037	2,037	2,042	2,052
Real estate	1,251	1,303	1,321	1,326	1,207	1,254	1,263	1,269	1,275	1,280
Services	23,435	24,300	24,616	24,457	23,284	23,926	24,025	24,083	24,199	24,287
Business services	4,868.6	5,106.6	5,143.0	5,201.9	4,815	5,044	5,083	5,086	5,107	5,145
Health services	6,617.2	6,880.8	6,918.6	6,950.8	6,596	6,800	6,822	6,853	6,886	6,923
Government	15,674	17,094	16,200	16,072	16,647	17,038	17,031	17,031	17,025	17,074
Federal	2,907	2,976	2,977	2,971	2,882	2,933	2,935	2,935	2,930	2,944
State	3,663	3,822	3,737	3,726	3,881	3,943	3,947	3,932	3,950	3,951
Local	9,104	10,296	9,486	9,375	9,884	10,162	10,149	10,164	10,145	10,179

p = preliminary

Table B-2. Average weekly hours of production or nonsupervisory workers[1] on private nonagricultural payrolls by industry

Industry	Not seasonally adjusted				Seasonally adjusted					
	Aug. 1986	June 1987	July 1987 p	Aug. 1987 p	Aug. 1986	Apr. 1987	May 1987	June 1987	July 1987 p	Aug. 1987 p
Total private	35.1	35.0	35.0	35.3	34.7	34.7	34.9	34.8	34.8	35.0
Mining	42.3	42.4	42.3	43.2	(2)	(2)	(2)	(2)	(2)	(2)
Construction	38.3	38.1	38.6	38.6	(2)	(2)	(2)	(2)	(2)	(2)
Manufacturing	40.7	41.1	40.6	40.9	40.8	40.6	41.0	41.0	41.0	41.0
Overtime hours	3.5	3.7	3.6	3.9	3.5	3.5	3.8	3.7	3.8	3.8
Durable goods	41.1	41.7	41.0	41.3	41.4	41.2	41.6	41.5	41.5	41.6
Overtime hours	3.5	3.8	3.6	3.9	3.6	3.6	3.9	3.8	3.8	4.0
Lumber and wood products	40.6	41.3	40.4	41.0	40.2	40.6	41.0	40.6	40.6	40.7
Furniture and fixtures	40.1	40.0	39.1	39.9	39.9	39.1	39.9	40.0	39.9	39.7
Stone, clay, and glass products	42.8	42.5	42.5	42.5	42.3	41.9	42.3	42.0	42.2	42.0
Primary metal industries	41.5	43.2	42.7	42.9	42.0	42.3	43.1	43.1	43.1	43.4
Blast furnaces and basic steel products	41.2	43.8	43.5	42.8	41.7	42.4	43.3	43.5	43.6	43.3
Fabricated metal products	41.1	41.7	40.8	41.5	41.3	41.2	41.6	41.5	41.4	41.8
Machinery, except electrical	41.2	42.3	41 7	41.8	41.6	41.8	42.2	42.2	42.4	42.2
Electrical and electronic equipment	40.9	41.1	40.4	40.8	41.1	40.6	40.8	41.1	41.1	41.0
Transportation equipment	41.6	41.9	41.1	41.1	42.4	41.9	42.2	41.9	41.8	41.9
Motor vehicles and equipment	41.4	42.1	41.0	41.0	42.5	42.1	42.5	42.0	41.8	42.1
Instruments and related products	40.5	41.5	40.9	41.6	40.9	41.0	41.5	41.5	41.6	42.0
Miscellaneous manufacturing	39.2	39.3	38.6	39.3	(2)	(2)	(2)	(2)	(2)	(2)
Nondurable goods	40.1	40.3	40.0	40.3	40.0	39.7	40.2	40.2	40.3	40.3
Overtime hours	3.6	3.6	3.6	3.9	3.4	3.3	3.7	3.6	3.7	3.7
Food and kindred products	40.6	40.1	39.9	40.7	40.2	39.8	40.1	40.1	39.9	40.3
Tobacco manufactures	36.2	40.1	35.4	35.8	(2)	(2)	(2)	(2)	(2)	(2)
Textile mill products	41.4	42.4	41.7	41.9	41.2	41.4	42.0	42.1	42.6	41.7
Apparel and other textile products	36.7	37.4	37.0	37.3	36.6	36.1	37.2	37.1	37.3	37.3
Paper and allied products	43.2	43.3	43.2	43.1	43.4	43.0	43.5	43.3	43.5	43.3
Printing and publishing	38.1	37.7	37.8	38.1	38.0	37.7	37.9	38.1	38.1	37.9
Chemicals and allied products	41.7	42.1	41.9	42.0	42.0	42.2	42.1	42.0	42.2	42.3
Petroleum and coal products	44.4	43.3	44.7	44.9	44.2	43.9	44.3	43.3	44.5	44.7
Rubber and miscellaneous plastics products	41.2	41.8	41.1	41.5	(2)	(2)	(2)	(2)	(2)	(2)
Leather and leather products	36.8	39.3	38.4	38.4	(2)	(2)	(2)	(2)	(2)	(2)
Transportation and public utilities	39.4	39.1	39.4	39.3	39.1	39.0	39.2	38.8	39.2	39.0
Wholesale trade	38.5	38.4	38.3	38.5	38.4	38.2	38.3	38.2	38.1	38.4
Retail trade	29.8	29.6	30.0	30.3	29.2	29.5	29.4	29.2	29.3	29.6
Finance, insurance, and real estate	36.5	36.4	36.1	36.6	(2)	(2)	(2)	(2)	(2)	(2)
Services	32.8	32.6	32.8	33.0	32.4	32.4	32.5	32.5	32.5	32.6

---

[1] Data relate to production workers in mining and manufacturing; to construction workers in construction; and to nonsupervisory workers in transportation and public utilities; wholesale and retail trade; finance, insurance, and real estate; and services. These groups account for approximately four-fifths of the total employees on private nonagricultural payrolls.

[2] This series is not published seasonally adjusted since the seasonal component is small relative to the trend-cycle and/or irregular components and consequently cannot be separated with sufficient precision.

p = preliminary.

Table B-3. Average hourly and weekly earnings of production or nonsupervisory workers[1] on private nonagricultural payrolls by industry

Industry	Average hourly earnings				Average weekly earnings			
	Aug. 1986	June 1987	July 1987 p	Aug. 1987 p	Aug. 1986	June 1987	July 1987 p	Aug. 1987 p
Total private	$8.70	$8.92	$8.91	$8.95	$305.37	$312.20	$311.85	$315.94
Seasonally adjusted	8.77	8.94	8.96	9.03	304.32	311.11	311.81	316.05
Mining	12.51	12.44	12.33	12.42	529.17	527.46	521.56	536.54
Construction	12.44	12.61	12.57	12.68	476.45	480.44	485.20	489.45
Manufacturing	9.68	9.87	9.88	9.86	393.98	405.66	401.13	403.27
Durable goods	10.22	10.42	10.41	10.40	420.04	434.51	426.81	429.52
Lumber and wood products	8.33	8.44	8.47	8.54	338.20	348.57	342.19	350.14
Furniture and fixtures	7.50	7.66	7.71	7.77	300.75	306.40	301.46	310.02
Stone, clay, and glass products	10.07	10.29	10.31	10.32	431.00	437.33	438.18	438.60
Primary metal industries	11.74	11.97	12.01	11.95	487.21	517.10	512.83	512.66
Blast furnaces and basic steel products	13.61	13.83	13.84	13.86	560.73	605.75	602.04	593.21
Fabricated metal products	9.82	10.00	9.96	9.92	403.60	417.00	406.37	411.68
Machinery, except electrical	10.59	10.76	10.74	10.73	436.31	455.15	447.86	448.51
Electrical and electronic equipment	9.64	9.84	9.89	9.89	394.28	404.42	399.56	403.51
Transportation equipment	12.70	12.88	12.83	12.91	528.32	539.67	527.31	530.60
Motor vehicles and equipment	13.29	13.47	13.35	13.43	550.21	567.09	547.35	550.63
Instruments and related products	9.47	9.70	9.74	9.72	383.54	402.55	398.37	404.35
Miscellaneous manufacturing	7.51	7.74	7.71	7.66	294.39	304.18	297.61	301.04
Nondurable goods	8.94	9.11	9.16	9.13	358.49	367.13	366.40	367.94
Food and kindred products	8.66	8.91	8.88	8.83	351.60	357.29	354.31	359.38
Tobacco manufactures	13.55	15.57	14.84	14.13	490.51	624.36	525.34	505.85
Textile mill products	6.97	7.15	7.14	7.19	288.56	303.16	297.74	301.26
Apparel and other textile products	5.83	5.91	5.89	5.88	213.96	221.03	217.93	219.32
Paper and allied products	11.19	11.41	11.50	11.46	483.41	494.05	496.80	493.93
Printing and publishing	10.02	10.19	10.24	10.28	381.76	384.16	387.07	391.67
Chemicals and allied products	11.99	12.27	12.36	12.35	499.98	516.57	517.88	518.70
Petroleum and coal products	14.06	14.43	14.46	14.46	624.26	624.82	646.36	649.25
Rubber and miscellaneous plastics products	8.77	8.87	8.94	8.90	361.32	370.77	367.43	369.35
Leather and leather products	5.92	6.04	5.97	6.05	217.86	237.37	229.25	232.32
Transportation and public utilities	11.67	11.91	11.99	12.07	459.80	465.68	472.41	474.35
Wholesale trade	9.32	9.57	9.57	9.63	358.82	367.49	366.53	370.76
Retail trade	5.97	6.08	6.07	6.06	178.30	179.97	182.10	183.62
Finance, insurance, and real estate	8.34	8.68	8.66	8.79	304.41	315.95	312.63	321.71
Services	8.04	8.35	8.33	8.40	263.71	272.21	273.22	277.20

[1] See footnote 1, table B-2.

p = preliminary.

Table B-4. Hourly Earnings Index for production or nonsupervisory workers[1] on private nonagricultural payrolls by industry

(1977 = 100)

Industry	Not seasonally adjusted					Seasonally adjusted						
	Aug. 1986	June 1987	July 1987p	Aug. 1987p	Percent change from: Aug. 1986-Aug. 1987	Aug. 1986	Apr. 1987	May 1987	June 1987	July 1987p	Aug. 1987p	Percent change from: July 1987-Aug. 1987
Total private nonfarm:												
Current dollars	168.6	172.6	172.7	173.0	2.6	169.5	172.6	172.9	172.9	173.2	173.9	0.4
Constant (1977) dollars	94.6	93.6	93.4	N.A.	(2)	95.2	94.2	94.0	93.8	93.7	N.A.	(3)
Mining	181.9	182.1	182.5	182.0	.1	(4)	(4)	(4)	(4)	(4)	(4)	(4)
Construction	152.0	154.1	153.6	153.9	1.2	152.0	153.7	154.1	155.0	154.3	153.9	-.3
Manufacturing	171.9	174.7	175.0	174.4	1.5	172.7	175.0	174.4	174.7	174.8	175.3	.3
Transportation and public utilities	170.3	174.7	175.2	175.7	3.2	171.2	175.2	176.2	175.6	176.2	176.6	.2
Wholesale trade	172.0	176.4	176.5	177.5	3.2	(4)	(4)	(4)	(4)	(4)	(4)	(4)
Retail trade	157.5	160.3	160.3	160.7	2.0	158.6	159.8	160.2	160.3	160.9	161.8	.6
Finance, insurance, and real estate	179.5	186.5	186.4	187.8	4.6	(4)	(4)	(4)	(4)	(4)	(4)	(4)
Services	172.7	179.2	179.0	179.7	4.1	174.6	179.4	179.9	179.9	180.5	181.7	.7

1 See footnote 1, table B-2.

2 Percent change is -1.4 percent from July 1986 to July 1987, the latest month available.

3 Percent change is -.1 percent from June 1987 to July 1987, the latest month available.

4 These series are not seasonally adjusted since the seasonal component is small relative to the trend-cycle and/or irregular components and consequently cannot be separated with sufficient precision.

N.A. Data not available.

p = preliminary.

Table B-5. Indexes of aggregate weekly hours of production or nonsupervisory workers[1] on private nonagricultural payrolls by industry

(1977 = 100)

Industry	Not seasonally adjusted				Seasonally adjusted					
	Aug. 1986	June 1987	July 1987 p	Aug. 1987 p	Aug. 1986	Apr. 1987	May 1987	June 1987	July 1987 p	Aug. 1987 p
Total	120.1	122.1	122.4	123.8	117.6	119.6	120.2	120.0	120.6	121.2
Goods-producing	100.3	101.0	100.0	102.1	97.8	98.0	99.2	98.9	99.5	99.6
Mining	83.2	83.7	84.4	86.8	82.6	81.3	83.4	83.5	85.3	86.2
Construction	146.6	141.1	146.1	148.2	132.0	132.8	134.3	132.6	133.3	133.6
Manufacturing	92.2	94.0	91.9	93.9	91.9	92.1	93.1	93.1	93.6	93.7
Durable goods	89.0	91.5	88.5	90.2	89.9	89.6	90.5	90.5	90.5	91.1
Lumber and wood products	102.9	106.1	104.8	106.8	97.9	102.0	103.2	101.7	102.4	102.0
Furniture and fixtures	106.6	109.1	105.9	111.0	106.5	105.7	109.0	109.5	111.6	111.1
Stone, clay, and glass products	90.0	89.5	88.6	90.0	86.3	86.3	86.9	86.1	86.1	86.3
Primary metal industries	59.8	64.3	62.4	6[illegible].7	60.6	62.1	63.1	63.5	63.9	64.5
Blast furnaces and basic steel products	47.5	52.5	52.1	51.5	47.9	49.6	50.7	51.4	52.0	51.9
Fabricated metal products	87.7	90.3	86.6	89.1	88.4	88.4	89.0	89.1	89.0	89.9
Machinery, except electrical	84.2	87.0	84.8	85.6	86.0	84.8	86.0	86.5	87.0	87.4
Electrical and electronic equipment	100.5	100.0	97.6	99.4	101.3	99.0	99.4	99.9	100.5	100.3
Transportation equipment	92.3	97.1	90.9	91.5	97.5	96.6	97.3	96.6	94.5	96.5
Motor vehicles and equipment	80.2	86.4	78.1	78.2	86.8	85.6	86.[illegible]	85.1	81.2	84.7
Instruments and related products	101.3	103.1	100.8	102.4	102.1	101.0	102.[illegible]	102.2	103.0	103.5
Miscellaneous manufacturing	80.3	82.2	78.1	82.4	79.7	79.9	81.0	81.4	82.0	81.8
Nondurable goods	96.9	97.8	96.8	99.4	95.0	95.7	97.0	97.0	98.2	97.6
Food and kindred products	106.8	99.5	102.7	108.2	98.3	99.3	99.6	99.3	99.8	99.7
Tobacco manufactures	72.9	72.5	63.9	68.5	72.8	77.3	80.1	76.3	72.9	68.8
Textile mill products	79.7	84.4	82.0	84.0	78.8	81.3	82.9	83.3	85.4	82.9
Apparel and other textile products	84.8	87.6	84.1	86.7	84.6	83.5	85.8	85.9	88.2	86.5
Paper and allied products	99.5	101.2	100.2	100.3	99.2	99.5	100.5	100.0	100.6	100.2
Printing and publishing	128.0	129.8	129.6	131.0	128.1	128.7	130.0	131.1	131.6	131.1
Chemicals and allied products	92.7	93.9	94.2	94.6	93.1	93.4	93.7	92.8	94.5	94.9
Petroleum and coal products	85.8	85.2	87.8	89.4	83.5	82.9	84.5	83.4	84.9	86.8
Rubber and miscellaneous plastics products	109.9	115.7	111.8	114.6	110.7	112.6	114.5	114.8	115.3	115.9
Leather and leather products	56.5	62.0	58.6	62.0	55.8	57.4	59.5	59.7	61.4	61.1
Service-producing	131.1	133.8	134.7	135.8	128.6	131.5	131.9	131.7	132.2	133.2
Transportation and public utilities	105.6	109.4	109.5	109.5	104.8	107.9	108.5	107.6	108.9	108.6
Wholesale trade	118.4	118.7	118.7	119.4	117.5	117.4	117.7	117.6	117.5	118.3
Retail trade	122.2	123.3	124.6	125.9	118.6	121.6	121.2	120.4	121.1	122.3
Finance, insurance, and real estate	140.6	144.4	144.2	146.1	138.6	142.0	142.5	142.7	141.6	144.0
Services	149.5	153.7	155.1	156.3	146.5	150.3	151.2	151.7	152.4	153.3

[1] See footnote 1, table B-2.

p = preliminary.

Table B-6. Indexes of diffusion: Percent of industries in which employment[1] increased

Time span	Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Over 1-month span	1985	55.9	47.0	52.4	47.3	53.2	46.8	53.8	53.8	47.8	53.2	54.3	57.3
	1986	53.2	48.1	48.1	53.5	52.4	46.8	52.4	56.2	55.1	53.2	59.7	59.7
	1987	53.5	56.8	58.6	58.4	58.6	55.1	p69.5	p54.9				
Over 3-month span	1985	51.1	48.4	42.4	46.5	44.3	49.7	47.0	48.6	45.9	47.6	55.1	56.5
	1986	49.7	44.9	45.7	48.4	47.6	45.4	48.4	55.1	55.9	58.1	58.6	60.3
	1987	58.6	59.5	61.1	61.6	61.4	p68.4	p65.1					
Over 6-month span	1985	46.5	46.5	43.2	44.3	44.3	45.1	43.0	44.3	49.2	49.2	47.3	45.9
	1986	47.6	47.6	43.0	43.2	45.4	48.4	47.3	53.0	59.2	58.9	57.8	58.9
	1987	61.9	62.7	58.9	p68.1	p65.9							
Over 12-month span	1985	44.6	44.1	43.8	40.8	41.6	41.6	42.2	42.4	43.8	44.3	44.1	42.4
	1986	43.2	44.1	46.2	45.7	47.8	49.5	49.5	51.6	54.9	52.2	55.1	56.5
	1987	p62.2	p64.6										

[1] Number of employees, seasonally adjusted for 1, 3, and 6 month spans, on payrolls of 185 private nonagricultural industries. Data for the 12-month span are unadjusted.

p = preliminary.

NOTE: Figures are the percent of industries with employment rising. (Half of the unchanged components are counted as rising.) Data are centered within the spans.

Senator **Proxmire**. Thank you very much, Commissioner Norwood, for your usually highly competent summary of the developments over the last month in the employment and unemployment situation.

You have a table that showed a fascinating difference between the recovery that took place after the 1974–75 recession and the recession of 1982. What it showed was that the civilian labor force total increased much more and much more rapidly in the earlier period; that is, between March 1975 and December 1979, it increased 13 million, according to your data that I have in front of me, and in this latest recovery the increase in the labor force has been only about 9 million.

Now, does that mean that if we had the same increase in the labor force in the past 4 or 5 years that we had in the 1975–79 period, we would now have about 4 million more people out of work and have an unemployment rate of about 9 percent. In other words, much of this recovery has been because the work force has not grown as rapidly as it did in the previous recovery.

Mrs. **Norwood**. The work force has not grown as much, in large part because the growth of population has slowed down. Had that population growth continued, there probably would have been more stimulation of the economy.

I think it is clear that it has been much easier for us to have a reduced unemployment rate, given the slowdown in labor force growth, but I do not think that we can reverse that statement and say that all of the difference would have been found among the unemployment. It has clearly been a much easier situation.

The other point is that we have had many fewer youngsters, particularly teenagers entering the work force, which brings about, in a sense, a downward pull on the unemployment rate.

Senator **Proxmire**. But it seems to me it is fair to say we would have had somewhat higher unemployment, probably, if we had not had the decline in the rate of growth of the work force.

Now, during the first half of 1987, nonfarm productivity rose at an annual rate of just under 1 percent. But it rose; productivity rose. But real wages fell by 1.3 percent.

Why did real wages fall, even though productivity went up? In other words, people are more productive. They are producing more per hour worked, but their wages are going down. That is hard for me to understand.

I would also like to ask you if workers didn't benefit, and they obviously did not from their increased productivity, who did?

Mrs. **Norwood**. One of the things that is happening particularly in manufacturing and certainly with farm products is that we are holding the line on prices in the case of farm products. In many cases some products are being sold at lower prices than before.

So some of these productivity gains are being seen in a rationalization of industry, reductions in cost, and lower prices. Some of it, however, is probably going into increased profits.

Senator **Proxmire**. Now, workers' real average weekly earnings fell 0.3 percent in July. That was the fifth decline in the past 7 months. Over the past year, real wages have declined 1.2 percent. In fact, since July 1978, the buying power of the average American workers has nosedived 11.6 percent.

Would you comment on the lower real earnings statistics? Is there something here in the statistics that we are missing? Is this an unfair description of what is happening to workers' income, or is there some interpretation I am missing here?

Mrs. **Norwood**. It is clear from the average earning series that workers' earnings, on average, are not keeping up with inflation. If we look, however, at our employment cost index, particularly that part of it which includes fringe benefits, we find that the civilian nonfarm population has an increase over the year of about 3.3 percent and the CPI from July to July 3.9 percent. So they are close.

I think that that is a better comparison, but it clearly shows that workers' earnings have not kept up most recently with the increase in inflation. That is partly because of the turnaround in oil prices.

Senator **Proxmire**. Let me ask you about something you mentioned in your statement that you made to us this morning. You pointed out what seems to me really an astonishing fact; that in some areas there is actually less employment than there was at the depth of the last recession.

Mrs. **Norwood**. That is right.

Senator **Proxmire**. Some of those are in my State. But is there any particular area of the country that has particularly suffered from this and is probably worse off than it was? Would this be the case in Louisiana, Texas, and Oklahoma?

Mrs. **Norwood**. The oil extraction industry, of course, has affected some of the areas of the southwest. The north central part of the country and the south central part of the country have been affected, particularly by apparel and textiles and by some of the heavy durable manufacturing—the decline in nonelectrical machinery, for example, and transportation equipment and some of the feeder industries that are located there.

One of the points that is of some interest, of course, is that in some of these cases, particularly apparel, for example, the declines in employment are really a continuation of a trend that has been going on since the 1940's and 1950's. Some of the declines, of course, are quite new.

Senator **Proxmire**. I suppose the American people are about as disturbed about the merchandise trade deficit as anything. The people I talk to in Wisconsin certainly are; I think that is true generally. They are concerned about the fact that we are importing so much from abroad, exporting so little, and that we are exporting jobs in effect. We hear this constantly, not only from labor people but from business people, too, very widely.

The merchandise trade deficit reached still another all-time record of $39.5 billion in the second quarter. That deficit has achieved record levels in six of the last seven quarters.

With your knowledge of import and export prices and the drop in the dollar, the spectacular drop in the dollar really, can you give us any insights into why, so long after the decline in the value of the dollar, our international balance of payments position just doesn't improve?

I know there is a J, but that J seems to be an awfully long one before it is going up.

Mrs. **Norwood**. Yes, it is. The J curve certainly has been considerably extended, much more than most economists expected. I think there are a lot of reasons for it.

First, it is quite clear that although import prices have increased, many of our trading partners, particularly the Japanese, have absorbed large portions of that increase. They have been reducing their profits in order to maintain their market shares. So I think that is one point.

Second, there has been a considerable restructuring of U.S. trade with other countries. We are getting a much larger proportion of our trade now from places like Korea and Taiwan and other places which have their currencies pegged to the U.S. dollar. So their prices are not really affected by any drop in the value of the dollar.

Third, during the whole period of the 1970's and leading up to the difficulties we have now, I think there has been some decline in our competitive structure and we have had many manufacturing industries which have become somethat inefficient and high cost. It will take some time for them to turn around. Some of them are beginning to do that, but that will take some time.

During that period into the 1980's, with very high value of the dollar, many companies began out-sourcing production so that there are many facilities abroad, and it is unlikely that much of that will be brought back to this country but, if so, it will be done really fairly slowly.

So I think that there are a number of reasons for this. The trade balance picture, I think, is improving and I expect it to improve further. But I think it is going to be a lot slower than most people had expected.

Senator **Proxmire**. A lot slower.

Mrs. **Norwood**. Yes.

Senator **Proxmire**. So it might be, you think, several more months, maybe a year or two before we get the benefits of the lower dollar.

Mrs. **Norwood**. I think that the crucial issue is really the response that American producers make.

Senator **Proxmire**. I don't hear you say much about the deficit, the Federal deficit, the fiscal deficit.

Do you think that plays a significant role, too? Lots of people argue that that is a central factor.

Mrs. **Norwood**. Clearly it has been. It has an important effect, as you know better than I, on the influx and the inflow of foreign funds to this country because essentially what we are doing is having foreigners support our economy because of our own deficits. So that clearly has a very important effect.

Senator **Proxmire**. As you know, the Occupational Safety and Health Administration has recently been ordered by the U.S. courts to expand its program of letting workers know they have been exposed to dangerous substances. Congress is also working on legislation in that important worker safety and health area.

Can you supply us with any statistics on how the problem of worker exposure to dangerous substances is growing? Are you satisfied with the quality of the statistics in that field and do you have any proposal to improve them?

Mrs. **Norwood**. I am not satisfied at all with the quality of the data in the safety and health field. We have been reviewing our data. We have three basic sources of data. One is an annual survey of business establishments. The second is development of administrative data from workers' compensation records. And the third is a series of surveys on work injuries that we do ourselves in cooperation with the States.

We have, with your help, Mr. Chairman, contracted with the National Academy of Sciences' Committee on National Statistics. They have appointed a rather outstanding panel of experts to review the entire data system. They have completed their work and we are expecting by about the end of October to have their report. I anticipate that they will recommend a number of changes. We ourselves would like to see a number of changes and we will certainly share that report with you and others in the Congress as well as with the general public and our advisory committees.

On the subject of the high-risk notification, essentially, there is really very little data. It is very difficult even to recognize some of these problems. Even physicians are having difficulty recognizing many of these problems.

We are, however, undertaking a special survey, a work injury survey, looking at the effects on workers of the inhalation of dangerous substances, and that work has just begun. It will involve identification of cases by the States from their workers' comp records, and then a follow back to the workers themselves to find out exactly what has happened. So that work is underway.

We are also contracting with the National Center for Health Statistics and we have been cooperating with NIOSH to add some questions to the health interview survey so that we can get at the other side of this. We have a survey of business establishments. We would like to be able to compare those data with a survey of the workers themselves. And we have some other ideas which we will be presenting through the budget process at the proper time.

What we are really doing right now is waiting for the report which should be coming out fairly soon from the National Academy of Sciences and I do expect that to be critical and constructive. That is why we went to them because we felt that we really needed to have expert advice.

Senator **Proxmire**. Mrs. Norwood, as you mentioned in your statement, the percentage of the population that is employed today of the total population, of the population over 16 years of age and noninstitutional, is higher than it has ever been. In other words, a higher proportion of people are actually working than before, which is certainly good news.

But, as your chart shows, the improvement in the employment population ratio has occurred only among adult women. A big part of this is women coming into the work force still continuing to come in. From staying at home and being homemakers, they have entered into the work force as never before in our history, with adult men and teenagers still far below past records.

Why has the employment population ratio failed to improve for adult men and for teenagers?

Mrs. **Norwood**. Apparently because of the problems that we are seeing in the industrial restructuring of the economy. Many of the adult men are working in manufacturing industries. We are seeing a number of plants closing down and we are seeing a complete restructuring of activity and we are also seeing the need for retraining of many of these people because the kinds of jobs that they had before are no longer going to be jobs in the future.

Senator PROXMIRE. May I just interrupt?

The statistics that were just given to me indicate that since 1954, from 1951–54 for instance, the percentage of men 20 years and over, noninstitutional, who were working was above 85 percent, between 85–90 percent. And it is now down to less than 75 percent. So there has been a consistent drop.

Mr. PLEWES. There is really not much to add there. That is absolutely correct. It has gone down long term. I think that one of the things that is interesting is that in the last year or two after the recession, it has stopped going down. It has not gone up, but at least it has stopped going down.

Senator PROXMIRE. Since 1975, it has been about the same, but it was around 75 percent; now it's below 75 percent. But you are right. It is about the same.

Mr. PLEWES. A very large part of that was early retirement, and the early retirement trend has slowed down, at least in the last couple of years. But during that whole period that you are quoting, a large part of that was early retirement.

Mrs. NORWOOD. One of the interesting points that can be made about that also is the fact that men are retiring earlier, but women who have come into the labor force much later are staying in the labor force much longer, so we are not seeing at the older age cohort, the retirements for women that we are seeing for men because women have not built up their retirement.

Senator PROXMIRE. Is that because in many programs they don't qualify until they have worked a number of years and they have to get their years in? If they start at the age of 50, obviously they have to be older before they can retire.

Mrs. NORWOOD. That is right. Obviously, some of that is going to change. Some two or three decades from now, I think that the data will show something somewhat different.

Senator PROXMIRE. Your chart 7 shows that the number of long-term unemployed is still higher than at any time during the peaks of the last two recessions. Two million people have been unemployed for 4 months or longer.

What are the characteristics of the long-term unemployed? That is really the most tragic unemployed, the kind of unemployment that causes terrible disruptions and trauma.

Is the United States creating a class of people who are unemployable and simply cannot find jobs, even in a tight labor market?

Mrs. NORWOOD. We clearly have a large group who have been unemployed for 6 months or more. There are more than 1 million of them, 1,100,000 of them. They are disproportionately minority. They get into a situation where they need retraining. Their educational levels often are relatively low.

There really needs to be, in my view, a renewed effort in this country to strengthen the basic educational system so that workers will be in a position to take the kind of training that they need.

I am very concerned about those groups. I believe that the American labor market is a very dynamic one and that most people who have a spell of unemployment usually manage to find a job or engage in some other activity fairly easily, and though they suffer some difficulties during the period of unemployment, they often receive unemployment insurance and they make out.

It is those who, month after month after month, remain unemployed that we need to be very concerned about.

Senator **Proxmire**. In July, both the Consumer Price Index and the Producer Price Index rose only 0.2 percent. That was a much smaller rise than these indexes were showing earlier in the year.

What accounted for the slowdown in the inflation rate and is there any evidence that it will continue?

Mrs. **Norwood**. The inflation rates have for a long time been very much affected by energy prices and by food prices and they will probably continue to be. Food prices jump up and down, depending sometimes on the weather and sometimes, as you well know, on conditions on the farm and decisions that are made about livestock and plantings.

The energy prices have been slowing down. The slowdown is a little bit less than occurred last year, but they have been slowing down since then.

Perhaps Mr. Dalton would like to comment further.

Senator **Proxmire**. Mr. Dalton.

Mr. **Dalton**. Specifically in July, both the Producer Price Index and the Consumer Price Index experienced lower food prices and that accounted for the smaller increase in July.

Senator **Proxmire**. But that is seasonally adjusted, isn't it?

Mr. **Dalton**. Yes, it is.

But through the first 7 months of the year, the CPI has risen at an annual rate of 5 percent, with energy prices rising at an annual rate of 14.3 percent. In contrast, in 1986, energy prices declined almost 20 percent. So the big difference this year is pretty clearly energy.

Mrs. **Norwood**. And the big issue there, of course, is that energy prices are very much dependent on conditions in the Persian Gulf, so the future of inflation is in part at least dependent on what happens there and the effect of that activity on the price of oil.

Senator **Proxmire**. In spite of the fact that we get a very small proportion of our oil from the Persian Gulf, less than 6 percent, I understand. Of course, we have a glut of oil in this country that we can't produce, and that is the problem in Alaska and Louisiana and so forth.

Mrs. **Norwood**. Somewhat higher priced.

Senator **Proxmire**. Between April and July, the civilian unemployment rate fell from 6.3 to 6 percent. These are months when seasonal factors can distort the unemployment figures.

Now that we have the August data, can you discern any unusual seasonal factors in the data that may have affected the unemployment picture this past summer?

Mrs. **Norwood**. We think that the August data are fairly stable and represent what is actually happening. We were concerned, in July in particular, about some of the developments that occurred.

The August increase in the household survey which was very large and I think perhaps somewhat overstated was largely for teenagers. And I think that is something that bears watching. The establishment survey is showing considerably more moderate growth than the household survey. And the seasonals are somewhat different for the two surveys, in part because of the various activities of youngsters and in part because during the summer months there are still a lot of unpaid vacations, so people are off the payroll during the summer months. This means that the seasonal adjustment factors are somewhat different—in fact they go in different directions—for the two surveys.

Senator **Proxmire**. In addition to the regular budget figures, the Congressional Budget Office publishes—and I quote—a Standardized Employment Deficit which eliminates the influence of recessions on the deficit by calculating the Federal deficit that would occur at a constant 6 percent unemployment rate. Currently the unemployment rate is 6 percent which is the figure used by CBO.

Does that mean that we can't count on additional cyclical improvements in the economy to have any further impact on the deficit unless the unemployment rate falls below 6 percent, in which case many people would say then we have to start putting on the brakes and having a tighter monetary policy, and we are going to have an inflation and the stock market begins to fall and so forth?

Mrs. **Norwood**. I am not at all sure that there is that direct a relationship between a further drop in the unemployment rate and what is really considered to be an increase in inflation. It is quite clear that the Phillips curve relationship has shifted considerably in recent years.

Senator **Proxmire**. So that we can stand a lower unemployment rate than we could before?

Mrs. **Norwood**. I like to think so.

Senator **Proxmire**. All of us would like to think so, but what is your professional judgment?

Mrs. **Norwood**. We will have to wait and see. [Laughter.]

Senator **Proxmire**. Okay. Go ahead.

Mrs. **Norwood**. I am not really familiar with all of the details of the CBO study. I am rather impressed with the fact—and I can't resist saying this—that it is almost impossible even to look at the Federal Government's deficit without using Bureau of Labor Statistics data.

You will forgive that plug.

Senator **Proxmire**. I think that is a good plus, I support it.

The last time the unemployment rate was 6 percent was in December 1979. A recent study by Dennis Roth of the Congressional Research Service argues that these figures are not comparable because of significant changes that have occurred in the labor market since then. For example, the proportion of people working part time has risen from 14 percent to 17.5 percent. The number of adult males working part time involuntarily has grown 62 percent. The unemployment rate for adult men, particularly black men, is much higher now than in 1979.

How would you compare a 6-percent unemployment rate today to a 6-percent unemployment rate in 1979 with those figures in mind?

Mrs. **Norwood**. That would be very difficult to do; 1979 was a year of increasing inflation also, and we need to keep that in mind it seems to me.

We had had most of the very massive increase of women coming into the labor market. Since that time, however, we have had quite a big increase in Hispanic entrants into the labor market. The Hispanic population of the country has gotten larger. We are seeing rather interesting trends for Hispanics now. Their labor force entrance is much larger even than the black minority and many of them are becoming employed. In fact, one out of every three new jobs is going to a Hispanic. So I think that is a very real difference.

I am not sure that I have very much more to add.

Senator **Proxmire**. According to an article in the August 1987 Monthly Labor Review, the growth in defense spending that occurred between 1980 and 1985, which was very, very big, as we know—that created 600,000 additional manufacturing jobs in defense-related industries.

During that time, overall manufacturing employment fell by 1 million jobs, implying that 1.6 million jobs were lost in nondefense manufacturing industries.

What do these new figures say about the strength of the nondefense manufacturing industry during that period, particularly in view of the fact that many people expect that we are going to have a flattening out at best in the defense procurement area? As you know, Congress has had to put on the brakes, and has put on the brakes pretty sharply.

Mrs. **Norwood**. It is very clear that defense expenditures have stimulated the job market. One of the things that has always fascinated me about defense expenditures is that one of the largest effects on jobs is in eating and drinking places. As you spend money for defense, you increase the cafeterias and the restaurant meals and so on.

Senator **Proxmire**. Sale of beer?

Mrs. **Norwood**. Yes.

On the other hand, the data suggest that durable manufacturing has not done as well as I would have expected. A good bit of the jobs in manufacturing that have been held and some of them that have been recouped have been in some of the nondurable jobs as well. Nonelectrical machinery, for example, is not really doing terribly well.

We seem to have housing-related manufacturing, like lumber and wood and furniture manufacturing, some of the appliances. They have held up, as has construction, though that is flattening out now because of the changes in interest rates.

Senator **Proxmire**. One school of thought holds that U.S. manufacturing industries are not in trouble because the manufacturing share of GNP has been relatively constant.

Does the BLS study suggest that this relatively constant share of GNP masked two trends: First, an increase in manufacturing output caused by the rise in defense spending which obscured a strong secular decline which we would otherwise have seen in nondefense industries?

Mrs. **Norwood**. Clearly, the defense spending helped employment in manufacturing. I don't think there is any doubt about that.

What would have happened in the absence of that probably is that we wouldn't have quite the same deficit position that we have and therefore our trade position and a number of other things might be different. So it is a little bit hard to look at that.

Senator **Proxmire**. But overall, the likelihood is that we would have had a decline in manufacturing.

Mrs. **Norwood**. I believe so; yes. I think that is a trend that has been continuing for a very long time. It has just been much more rapid during the 1980's than before.

Senator **Proxmire**. According to the August 31 productivity release from the Bureau of Labor Statistics, manufacturing productivity grew 4.9 percent at an annual rate during the second quarter. That was a large upward revision from the August 3 preliminary figures that showed a 3.3-percent increase in manufacturing productivity.

What factors account for the upward revision in manufacturing productivity? Is it normal for the revision to be that large? That seems to me a very large adjustment.

Mrs. **Norwood**. It was a very large adjustment. We revise our productivity figures when the gross national product accounts figures are revised, and there was a rather large revision in GNP data. That does give us some cause for concern, but we have to measure output and that is done in the best way possible by the Bureau of Economic Analysis.

Senator **Proxmire**. A 4.9-percent rise in manufacturing productivity in the second quarter resulted from a 3.4-percent increase in output, combined with a 1.5-percent decline in hours worked, according to the August 31 productivity release.

Monthly employment figures show that manufacturing employment went up 40,000 in the second quarter, and average weekly hours declined only two-tenths of 1 percent, from 41 to 40.9 hours.

What accounts for the 1½ percent decline in average weekly hours that was used to compute manufacturing productivity?

Mrs. **Norwood**. First of all, the productivity data are built upon a much broader base than the production worker data that we produced here or that you were talking about, and it includes all people who are employed.

Senator **Proxmire**. Within a month or two, the current expansion will overtake the 1975–80 expansion as the longest peacetime period without a recession. In terms of job growth, labor force growth and other measures of the strength of the economy, how does this expansion compare with the 1975–80 expansion and how does it compare for various groups in the labor force, such as women, blacks, and teenagers?

Mrs. **Norwood**. It does not compare as well. There has been, as we discussed earlier, a slowdown in labor force growth that has really been quite marked; 8.3 percent, for example, in the 1980's, compared to 14.1 percent in the 1975–79 period.

Employment has done a bit better—14 percent compared to 17 percent. Because of the combination of these factors, in particular the reduction in growth of the labor force, unemployment has declined markedly.

As for the different groups of the population, employment of women has been about the same in the current recovery period as in the past in terms of percentage growth.

The labor force growth of women has slowed down, however. It is continuing and I believe will continue to grow, but at a much slower pace. The black labor force has been growing at a somewhat slower pace, not nearly as much of a reduction in the rate of growth, however, as for the white population, and a larger proportion of the blacks have found jobs.

Senator **Proxmire**. Now let me ask you the question that really concerns me very much. That is, that it seems to be that it is no accident that when we talk about the extension of recovery, we talk about peace periods.

In war periods, we have had a much longer recovery. We had that in World War II. As you know, the Vietnam war is the other big example.

Now, I argue that in view of the massive deficits we have run, that are very comparable to the kind of deficits you might run in a war period, $200 billion deficits and close to it back to back, that they have had a real effect in extending this recovery period. And to the extent that we do what we should do and what I am sure you agree we should do, which is reduce those deficits as promptly and sharply as we can, it is going to have a slowdown effect on the economy.

Mrs. **Norwood**. I don't think there is any doubt about that.

Senator **Proxmire**. Would you agree that one of the reasons why we have had this long, long recovery is because we have had this fiscal policy that has been stimulated?

Mrs. **Norwood**. Clearly, as you yourself indicated earlier, the increase in defense expenditures has had an important effect on the labor market and I think it is important to take that into account. It is hard to know what would have happened in the absence of that development.

Senator **Proxmire**. One more question on minimum wage, unemployment, and inflation. Minimum wage is before the Senate, as you know. We may act on it. I am very supportive of an increase in the minimum wage. We have not had one for 6 years, and meanwhile the cost of living has gone up 27 percent. These are the poorest working people in our country and I think it is grossly unjust.

Every labor expert seems to have a strong view on the consequence of raising minimum wages. However, the conclusions of these experts range from no effects on employment and inflation to the loss of many jobs, especially for teenagers, and a serious increase in inflation.

I made a recent, very cursory study, which indicated that the minimum wage on the basis of experience historically has had a favorable effect as it has been increased.

The last time we had very, very high unemployment was when we had the first introduction—the minimum wage terminated that. In 1938, we had an unemployment of 17 percent. We put in the minimum wage and it was never that high again.

I also tried to check it out on the basis of the decades when we have had an increase in the minimum wage. We had it in the 1960's, a decline in the 1970's, and a decline in the minimum wage of course, effective minimum wage, the real minimum wage in the 1980's because inflation was so great and the minimum wage did not increase in the 1980's and it increased very little in the 1970's.

I find those seem to coincide with higher levels of unemployment. So I would like to know your conclusion as to what effect an action by the Congress to increase the minimum wage, as has been proposed, I think moderately and gradually over a period of years, what effect that might have on unemployment.

Mrs. **Norwood**. I really can't answer that question precisely. We have done a study in which we have looked at recent empirical studies that have been carried out by economists on the minimum wage.

Senator **Proxmire**. Can you make that available? I would like to see that study.

Mrs. **Norwood**. Yes, certainly. We will submit that to you.

[The following information was subsequently supplied for the record:]

U. S. Department of Labor

Commissioner for
Bureau of Labor Statistics
Washington, D.C. 20212

NOV 2 1987

Honorable William Proxmire
United States Senate
Washington, D.C. 20510

Dear Senator Proxmire:

At a recent Joint Economic Committee Hearing on the Employment Situation, I told you about a summary of recent research on the economic effects of minimum wage laws. As requested, I am sending you a copy of that summary.

If I can be of any further assistance, please let me know.

Sincerely yours,

Janet

JANET L. NORWOOD
Commissioner

Enclosure

Mrs. **Norwood**. The study summarized all the empirical work that we could find, and there is quite a bit of it. It is a rather substantial study.

As you know, the economics profession has generally taken the position that raising the minimum wage would reduce employment. Yet it is interesting that the empirical results are not entirely clear on that subject.

Most of the studies that have been done do show some disemployment effects on teenagers, but there is a great deal of uncertainty about the effect on adults.

The statistic that is most often quoted is a 1-percent reduction in youth employment in response to a 10-percent increase in the minimum wage. But the results, looking at blacks versus whites, women versus men, are quite mixed. There are those saying there is a big reduction in unemployment effect, and there are those who say the reverse.

Senator **Proxmire**. Let me just interrupt to say from a logical standpoint, a lot of people say well, of course you have less employment. If people have to pay more, they are not going to hire people to do the job.

On the other hand, if people who have these low incomes are paid a little more, this is high velocity spending, believe me. They don't put that in the bank. They spend it. It is a high turnover, and therefore it increases demand to a very considerable extent.

Mrs. **Norwood**. That is right. And there can also be an important productivity effect that would be important, I think, and would have an effect on lowering inflation.

Nevertheless, our review has shown that there are studies on both sides, and it is not easy to point to the literature and come up with a specific conclusion.

I would like to comment if I might, Senator, on one provision of the bill, at least the one that I have seen that is being considered, and that is the indexation aspect. So far as I understand it, the provision indexes the minimum wage to average hourly earnings.

There are some technical problems with the use of a single month's preliminary figure. Quite apart from that, it seems to me that one implication of that approach is that an increase in productivity in some industries that resulted in increased wages in those industries, would be transferred into the minimum wage industries.

It might be that given the obvious desire to improve social as well as economic conditions, that one might like to look at indexation using a price measure rather than the wage measure. I just throw that out to you.

Senator **Proxmire.** Mrs. Norwood, thank you very, very much for excellent testimony, as always, and also Mr. Dalton and Mr. Plewes for your very substantial help and understanding the unemployment situation and the inflation situation.

As usual, you did a top-flight job. I will be back here many times before I am through.

Mrs. **Norwood.** I certainly hope so.

Senator **Proxmire.** Well, like it not, I will be here. Thank you very much.

The committee will stand adjourned.

[Whereupon, at 10:25 a.m., the committee adjourned, subject to the call of the Chair.]

EMPLOYMENT-UNEMPLOYMENT

FRIDAY, OCTOBER 2, 1987

CONGRESS OF THE UNITED STATES,
JOINT ECONOMIC COMMITTEE,
Washington, DC.

The committee met, pursuant to notice, at 9:30 a.m., in room SD-628, Dirksen Senate Office Building, Hon. Paul S. Sarbanes (chairman of the committee) presiding.

Present: Senator Sarbanes and Representatives Scheuer and Fish.

Also present: Judith Davison, executive director; and William Buechner and Dale Jahr, professional staff members.

OPENING STATEMENT OF SENATOR SARBANES, CHAIRMAN

Senator SARBANES. The committee will come to order.

We are pleased once again to have Commissioner Norwood, the Commissioner of the Bureau of Labor Statistics, to testify on the September labor market statistics.

This is the first of two hearings that the committee will be holding this morning and we will be following it with a hearing on air traffic safety.

Commissioner, also, we're voting over on the floor and I think we should get started. We'll just have to handle the situation as best we can if a rollcall begins.

Before you begin, Mrs. Norwood, Senator D'Amato has requested that his opening statement be placed in the record. He had another commitment and is unable to be present.

[The written opening statement of Senator D'Amato follows:]

WRITTEN OPENING STATEMENT OF SENATOR D'AMATO

GOOD MORNING, MR. CHAIRMAN. I WOULD ALSO LIKE TO WELCOME DR. JANET NORWOOD. COMMISIONER NORWOOD, I AM MOST INTERESTED IN YOUR OBSERVATIONS ON SEPTEMBER'S EMPLOYMENT FIGURES.

AS WE ALL KNOW, LAST MONTH YOU REPORTED TO THIS COMMITTEE EMPLOYMENT FIGURES FOR AUGUST THAT WERE AT THEIR LOWEST SINCE THE END OF 1979. YOU REPORTED THAT THE TOTAL CIVILIAN EMPLOYMENT STOOD AT 113,100,000, A NEW RECORD HIGH. AN IMPRESSIVE INCREASE OF 354,000 IN JUST ONE MONTH'S TIME. THE UNEMPLOYMENT RATE IN AUGUST REMAINED STABLE AT 6.0 PERCENT.

YOUR REPORT SHOWS CONTINUED STRENGTH IN OUR ECONOMY THROUGH EXPANSION AND CREATION OF NEW JOBS. THESE FIGURES EXCEEDED THE EXPECTATIONS OF MOST ECONOMIC FORECASTERS.

FOR THE MONTH OF SEPTEMBER, THE UNEMPLOYMENT RATE DECREASED BY 0.1 OF A PERCENT TO 5.9 PERCENT. THE NUMBER OF INDIVIDUALS EMPLOYED, AS SHOWN BY BUSINESS PAYROLLS, INCREASED BY APPROXIMATELY 130,000 TO 113,230,000.

IN THE STATE OF NEW YORK, THE UNEMPLOYMENT RATE FOR THE MONTH OF SEPTEMBER REMAINED CONSTANT AT 4.5 PERCENT. OVERALL, DR. NORWOOD, THESE FIGURES PAINT A BRIGHT EMPLOYMENT PICTURE IN OUR NATION.

FOR THE PAST YEAR, THE EMPLOYMENT SITUATION IN THIS NATION HAS BEEN VERY STABLE. UNEMPLOYMENT REMAINS STEADY AROUND 6 PERCENT. EMPLOYMENT LEVELS ARE AT AN ALL TIME HIGH. THIS IS DUE IN NO SMALL PART TO THE LOWER INTEREST RATES AND LOWER INFLATION THAT HAVE RESULTED FROM THE PRESIDENT'S ECONOMIC PROGRAM. HOWEVER, THE LEVEL OF EMPLOYMENT NOT ONLY REFLECTS THE GENERAL HEALTH OF THE ECONOMY AND SPECIFIC INDUSTRIES, BUT ALSO THE INCREASE OR DECREASE IN THE NUMBER OF AMERICANS BRINGING HOME PAYCHECKS AND THEIR ABILITY TO MAKE PURCHASES. THEREFORE, WE MUST ALSO BE AWARE OF THE DROP IN THE VALUE OF THE DOLLAR AND ITS IMPACT ON THE AMERICAN WORKER. AMERICANS NEED BOTH JOBS AND GOOD SALARIES TO PROVIDE FOR THEMSELVES AND THEIR FAMILIES.

IT IS MY HOPE THAT YOUR TESTIMONY TODAY WILL PROVIDE ADDITIONAL ENCOURAGING EMPLOYMENT INFORMATION.

THANK YOU, MR. CHAIRMAN.

Senator Sarbanes. Mrs. Norwood, why don't you go ahead and proceed.

STATEMENT OF HON. JANET L. NORWOOD, COMMISSIONER, BUREAU OF LABOR STATISTICS, DEPARTMENT OF LABOR, ACCOMPANIED BY KENNETH V. DALTON, ASSOCIATE COMMISSIONER, OFFICE OF PRICES AND LIVING CONDITIONS; AND JOHN E. BREGGER, ASSISTANT COMMISSIONER, OFFICE OF CURRENT EMPLOYMENT ANALYSIS

Mrs. Norwood. Thank you very much, Mr. Chairman.

We are pleased to be here. I have with me Kenneth Dalton, our Associate Commissioner for Prices and Living Conditions; and John Bregger, on my left, our Assistant Commissioner for Current Employment Analysis.

Labor market signs were positive in September. Unemployment has been on a downward trend, and factory employment continued to grow. Both the overall jobless rate, at 5.8 percent, and the civilian worker rate, at 5.9 percent, have declined steadily during the year and in September were 1.1 percentage points below the levels of a year earlier.

In September, the household survey showed declines in both the labor force and employment. However, both had increased markedly in the previous month. Since April, the month before the large summer seasonal movements began, the labor force has increased by more than 500,000, and employment has grown by over 900,000. The civilian jobless rate dropped from 6.3 to 5.9 percent over the same 5-month period.

The business survey was up by 130,000 from August to September. Were it not for teachers and other school personnel off business payrolls because of strikes, payroll employment would have increased by about 200,000 over the month. Factory employment accounted for 55,000 of that gain. Indeed, manufacturing employment has increased by 165,000 in just the last 3 months. These gains have been widespread. The BLS diffusion index, which is heavily weighted toward manufacturing, reached a hefty 65 percent in September. It is true that factory hours were down over the month, but the decline merely reflects the unusual occurrence of the Labor Day holiday falling in the reference week of the survey.

In contrast to factory employment, construction jobs have lagged—they are down 35,000 over the month and 60,000 since this January. Employment in the mining industry has been growing slowly but steadily. Mining jobs have increased by about 40,000 since January, most of them in the oil and gas extraction industry.

In the service-producing sector, retail trade showed the only real strength in September, adding 70,000 jobs. The finance, insurance, and real estate industry, which has grown steadily during the current expansion, failed to post any employment increase, probably reflecting the joint effects of rising interest rates and construction activity slowdown. Employment in the services industry grew by 35,000, a very small gain for this industry.

The improvement in factory job performance over the last few months may have affected the relationship between the jobless rates of men and women. During the recession of the early 1980's, the predominantly male factory work force was hard hit, and the unemployment rate for men moved upward, surpassing the rate for women. More recently, the situation has changed—the rate for adult men and women both were near 6 percent in December and 5.5 percent in April. But partly because of the growth in factory jobs over the last few months, the rate for adult men has fallen to 5 percent in September, while the rate for adult women, at 5.4 percent, has shown little further improvement.

The jobless rate for teenagers has been relatively sticky. There has been considerable anecdotal evidence of localized labor shortages and rising wages in some jobs traditionally held by young people. Even so, their unemployment rate, at 16.3 percent in September, has shown less improvement, relatively speaking, than the adult rates during 1987. However, the black teenage jobless rate, although still a very high 30 percent, has improved markedly in recent months. The black teenage employment-population ratio has also shown some improvement, but that measure still stands at 30 percent, compared to nearly 50 percent for white teenagers.

In September, the current expansion reached 58 months, matching the length of the one which began in the spring of 1975. Job growth has been vigorous in both expansions, but the current expansion reflects the restructuring of industry which accelerated during the 1980's. The number of factory jobs has grown much less than in the late 1970's. Employment in the oil and gas extraction industry rose by 50 percent in the comparable period after 1975 but declined by 33 percent over the current expansion.

In both periods, strong job growth occurred in the service-producing sector. But even here, some differences between the two expansions can be seen in the composition of that growth. During the current expansion, for example, one in every eight new jobs has been in business services, far more than in the period after 1975. Employment in communications and public utilities declined during the current period but rose after 1975. And State and local jobs have not grown as fast in the 1980 period as in the earlier one.

On the demographic side, the labor force has grown far more slowly in the current period as the number of teenagers entering the work force declined. Labor force participation of women continued to increase but at a slower rate in the 1980's than in the 1970's.

In summary, I believe that labor market developments remain encouraging. The improvement we have seen in unemployment held in September, and employment in the Nation's factories continued to grow.

Mr. Chairman, we would be glad to try to answer any questions you have.

[The table attached to Mrs. Norwood's statement, together with the Employment Situation press release, follows:]

Unemployment rates of all civilian workers by alternative seasonal adjustment methods

Month and year	Unadjusted rate	X-11 ARIMA method							X-11 method (official method before 1980)	Range (cols. 2-9)
		Official procedure	Concurrent (as first computed)	Concurrent (revised)	Stable	Total	Residual	12-month extrapolation		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1986										
September...	6.8	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	-
October.....	6.6	6.9	6.9	7.0	7.0	6.9	6.9	7.0	7.0	.1
November....	6.6	6.9	6.9	7.0	6.9	6.9	7.0	6.9	7.0	.1
December....	6.3	6.7	6.7	6.7	6.6	6.7	6.7	6.7	6.7	.1
1987										
January.....	7.3	6.7	6.7	6.7	6.7	6.8	6.6	6.7	6.7	.2
February....	7.2	6.7	6.7	6.6	6.6	6.7	6.5	6.7	6.7	.2
March.......	6.9	6.6	6.6	6.5	6.6	6.6	6.5	6.6	6.6	.1
April.......	6.2	6.3	6.3	6.3	6.4	6.3	6.3	6.3	6.3	.1
May.........	6.1	6.3	6.3	6.3	6.4	6.3	6.4	6.3	6.3	.1
June........	6.3	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	-
July........	6.1	6.0	6.1	6.0	6.0	6.0	6.0	6.0	6.0	.1
August......	5.8	6.0	6.0	6.0	5.9	6.1	6.2	6.0	6.0	.3
September...	5.7	5.9	5.9	5.9	5.9	5.9	6.0	5.9	5.9	.1

SOURCE: U.S. DEPARTMENT OF LABOR
Bureau of Labor Statistics
October 1987

(1) Unadjusted rate. Unemployment rate for all civilian workers, not seasonally adjusted.

(2) Official procedure (X-11 ARIMA method). The published seasonally adjusted rate for all civilian workers. Each of the 3 major civilian labor force components--agricultural employment, nonagricultural employment and unemployment--for 4 age-sex groups--males and females, ages 16-19 and 20 years and over--are seasonally adjusted independently using data from January 1974 forward. The data series for each of these 12 components are extended by a year at each end of the original series using ARIMA (Auto-Regressive, Integrated, Moving Average) models chosen specifically for each series. Each extended series is then seasonally adjusted with the X-11 portion of the X-11 ARIMA program. The 4 teenage unemployment and nonagricultural employment components are adjusted with the additive adjustment model, while the other components are adjusted with the multiplicative model. The unemployment rate is computed by summing the 4 seasonally adjusted unemployment components and calculating that total as a percent of the civilian labor force total derived by summing all 12 seasonally adjusted components. All the seasonally adjusted series are revised at the end of each year. Extrapolated factors for January-June are computed at the beginning of each year; extrapolated factors for July-December are computed in the middle of the year after the June data become available. Each set of 6-month factors are published in advance, in the January and July issues, respectively, of Employment and Earnings.

(3) Concurrent (as first computed, X-11 ARIMA method). The official procedure for computation of the rate for all civilian workers using the 12 components is followed except that extrapolated factors are not used at all. Each component is seasonally adjusted with the X-11 ARIMA program each month as the most recent data become available. Rates for each month of the current year are shown as first computed; they are revised only once each year, at the end of the year when data for the full year become available. For example, the rate for January 1984 would be based, during 1984, on the adjustment of data from the period January 1974 through January 1984.

(4) Concurrent (revised, X-11 ARIMA method). The procedure used is identical to (3) above, and the rate for the current month (the last month displayed) will always be the same in the two columns. However, all previous months are subject to revision each month based on the seasonal adjustment of all the components with data through the current month.

(5) Stable (X-11 ARIMA method). Each of the 12 civilian labor force components is extended using ARIMA models as in the official procedure and then run through the X-11 part of the program using the stable option. This option assumes that seasonal patterns are basically constant from year-to-year and computes final seasonal factors as unweighted averages of all the seasonal-irregular components for each month across the entire span of the period adjusted. As in the official procedure, factors are extrapolated in 6-month intervals and the series are revised at the end of each year. The procedure for computation of the rate from the seasonally adjusted components is also identical to the official procedure.

(6) Total (X-11 ARIMA method). This is one alternative aggregation procedure, in which total unemployment and civilian labor force levels are extended with ARIMA models and directly adjusted with multiplicative adjustment models in the X-11 part of the program. The rate is computed by taking seasonally adjusted total unemployment as a percent of seasonally adjusted total civilian labor force. Factors are extrapolated in 6-month intervals and the series revised at the end of each year.

(7) Residual (X-11 ARIMA method). This is another alternative aggregation method, in which total civilian employment and civilian labor force levels are extended using ARIMA models and then directly adjusted with multiplicative adjustment models. The seasonally adjusted unemployment level is derived by subtracting seasonally adjusted employment from seasonally adjusted labor force. The rate is then computed by taking the derived unemployment level as a percent of the labor force level. Factors are extrapolated in 6-month intervals and the series revised at the end of each year.

(8) 12-month extrapolation (X-11 ARIMA method). This approach is the same as the official procedure except that the factors are extrapolated in 12-month intervals. The factors for January-December of the current year are computed at the beginning of the year based on data through the preceding year. The values for January through June of the current year are the same as the official values since they reflect the same factors.

(9) X-11 method (official method before 1980). The method for computation of the official procedure is used except that the series are not extended with ARIMA models and the factors are projected in 12-month intervals. The standard X-11 program is used to perform the seasonal adjustment.

Methods of Adjustment: The X-11 ARIMA method was developed at Statistics Canada by the Seasonal Adjustment and Times Series Staff under the direction of Estela Bee Dagum. The method is described in The X-11 ARIMA Seasonal Adjustment Method, by Estela Bee Dagum, Statistics Canada Catalogue No. 12-564E, February 1980.

The standard X-11 method is described in X-11 Variant of the Census Method II Seasonal Adjustment Program, by Julius Shiskin, Allan Young and John Musgrave (Technical Paper No. 15, Bureau of the Census, 1967).

News
United States
Department
of Labor
Bureau of Labor Statistics
Washington, D.C. 20212

Technical information: (202) 523-1371
523-1944
523-1959
Media contact: 523-1913

USDL 87-423

TRANSMISSION OF MATERIAL IN THIS
RELEASE IS EMBARGOED UNTIL
8:30 A.M. (EDT), FRIDAY,
OCTOBER 2, 1987

THE EMPLOYMENT SITUATION: SEPTEMBER 1987

Unemployment was little changed in September, the Bureau of Labor Statistics of the U.S. Department of Labor reported today. The overall unemployment rate was 5.8 percent, and the rate for civilian workers was 5.9 percent. Both rates were 1.1 percentage points lower than a year earlier, with the improvement having been particularly strong since February.

The number of nonagricultural payroll jobs--as measured by the monthly survey of business establishments--edged up about 130,000, after seasonal adjustment. Total civilian employment--as measured by the monthly survey of households--declined by 310,000, following an increase of a similar magnitude in August. Over the past year, employment levels in the establishment and household series have advanced by 2.4 and 2.8 million, respectively.

Unemployment (Household Survey Data)

Both the number of unemployed persons in September--7.1 million--and the civilian worker unemployment rate--5.9 percent--were little changed from August, after seasonal adjustment. Similarly, jobless rates for adult men (5.0 percent), adult women (5.4 percent), teenagers (16.3 percent), whites (5.1 percent), blacks (12.3 percent), and Hispanics (8.2 percent) showed little or no over-the-month change. (See tables A-2 and A-3.)

The mean duration of unemployment, at 14.2 weeks, was also little changed in September, while median duration declined to 5.7 weeks. In recent months, both measures have edged down below levels posted earlier this year. (See table A-7.)

Civilian Employment and the Labor Force (Household Survey Data)

Total civilian employment declined more than usual in September and, after adjustment for seasonality, was down 310,000 to 112.8 million, offsetting an increase of similar magnitude in August. The August increase and September decline can be largely traced to the pattern of youth employment this summer. Teenage employment normally declines markedly (before seasonal adjustment) during the months of August and especially September, as young workers leave summer jobs in preparation for their return to school. This year, however, an unusually large group of teenagers remained in their jobs through the August reference week. This resulted in the unusually large seasonally adjusted increase in youth employment in August and the decline of similar magnitude in September.

Reflecting these developments, the percentage of the total civilian population that is employed--the employment-population ratio--receded to 61.6 percent in September, the same as in July. (See table A-2.)

Table A. Major indicators of labor market activity, seasonally adjusted

Category	Quarterly averages		Monthly data			Aug.-Sept. change
	1987		1987			
	II	III	July	Aug.	Sept.	
HOUSEHOLD DATA						
	Thousands of persons					
Labor force 1/..........	121,341	121,771	121,672	122,038	121,604	-434
Total employment 1/..	113,906	114,593	114,447	114,817	114,515	-302
Civilian labor force...	119,615	120,038	119,952	120,302	119,861	-441
Civilian employment..	112,180	112,860	112,727	113,081	112,772	-309
Unemployment.........	7,435	7,178	7,224	7,221	7,089	-132
Not in labor force.....	62,912	62,978	62,933	62,700	63,300	600
Discouraged workers..	1,037	1,011	N.A.	N.A.	N.A.	N.A.
	Percent of labor force					
Unemployment rates:						
All workers 1/.......	6.1	5.9	5.9	5.9	5.8	-0.1
All civilian workers.	6.2	6.0	6.0	6.0	5.9	-.1
Adult men..........	5.5	5.2	5.4	5.2	5.0	-.2
Adult women........	5.4	5.4	5.4	5.3	5.4	.1
Teenagers..........	17.0	15.9	15.5	16.0	16.3	.3
White..............	5.3	5.1	5.1	5.1	5.1	0
Black..............	13.2	12.4	12.6	12.4	12.3	-.1
Hispanic origin....	8.8	8.0	7.9	8.0	8.2	.2
ESTABLISHMENT DATA						
	Thousands of jobs					
Nonfarm employment.....	101,708	p102,271	102,126	p102,278	p102,410	p132
Goods-producing......	24,757	p24,882	24,850	p24,885	p24,912	p27
Service-producing....	76,951	p77,389	77,276	p77,393	p77,498	p105
	Hours of work					
Average weekly hours:						
Total private........	34.8	p34.8	34.8	p34.9	p34.6	p-0.3
Manufacturing........	40.9	p40.8	41.0	p41.0	p40.4	p-.6
Overtime...........	3.7	p3.7	3.8	p3.8	p3.6	p-.2

1/ Includes the resident Armed Forces. N.A.=not available.
p=preliminary.

After seasonal adjustment, the civilian labor force declined by 440,000 in September to 119.9 million; this drop also was confined largely to teenagers. With this decline, the labor force participation rate fell to 65.4 percent, still high by historical standards. The labor force has grown by 1.6 million over the past year.

Discouraged Workers (Household Survey Data)

At 1.0 million in the third quarter, the number of discouraged workers--persons who report that they want to work but are not looking for jobs because they believe they cannot find any--was little changed from the level for the second quarter. Blacks and women continue to be disproportionately represented among the discouraged. (See table A-14.)

Industry Payroll Employment (Establishment Survey Data)

The number of nonagricultural payroll jobs edged up 130,000 in September to 102.4 million, seasonally adjusted. The figures were dampened by the absence from payrolls of about 65,000 teachers and support workers due to labor disputes. (See table B-1.)

Manufacturing employment rose by 55,000 in September to 19.2 million, seasonally adjusted, as growth was widespread in both the durable and nondurable goods components. Job gains were particularly notable in primary metals and machinery. Factory employment increases have totaled 165,000 since June, raising the employment level to its highest point since August 1985.

Elsewhere in the goods sector, employment in mining continued its gradual recovery. Growth in the industry has totaled 40,000 since its January low, mostly in its oil and gas extraction component. In contrast, construction employment declined by 35,000 in September and was down by 60,000 so far this year.

In the service-producing sector, employment growth was generally moderate in September. Job gains were unusually slow in the services industry, which increased by 35,000, compared with an average increase of close to 90,000 over the current expansion. There was no increase at all in finance, insurance, and real estate; wholesale trade; and government, where employment was held down by teacher strikes. In contrast, retail trade employment increased by 70,000, more than offsetting the small decline of the previous month.

Weekly Hours (Establishment Survey Data)

The average workweek of production or nonsupervisory workers on private nonagricultural payrolls was down 0.3 hour to 34.6 hours, seasonally adjusted. The manufacturing workweek dropped by 0.6 hour to 40.4, and factory overtime fell by 0.2 hour to 3.6 hours. These declines reflected the unusual occurrence of Labor Day in the survey period, as some employees were not paid for the holiday and others worked fewer overtime hours.

As a result of the decline in the average workweek, the index of aggregate weekly hours of production on nonsupervisory workers on private nonagricultural payrolls dropped by 0.8 percent to 120.2 (1977=100), seasonally adjusted. (See table B-5.)

Hourly and Weekly Earnings (Establishment Survey Data)

Average hourly earnings were unchanged in September, while average weekly earnings fell by 0.9 percent, seasonally adjusted, also reflecting the decline in the workweek. Prior to seasonal adjustment, hourly earnings increased by 12 cents to $9.06, and weekly earnings were down $1.20 to $314.38. (See table B-3.)

The Hourly Earnings Index (Establishment Survey Data)

The Hourly Earnings Index (HEI) was 174.7 (1977=100) in September, seasonally adjusted, an increase of 0.3 percent from August. For the 12 months ended in September, the increase was 2.9 percent. The HEI excludes the effects of two types of changes unrelated to underlying wage rate movements--fluctuations in manufacturing overtime and interindustry employment shifts. In dollars of constant purchasing power, the HEI decreased 1.6 percent during the 12-month period ended in August. (See table B-4.)

The Employment Situation for October 1987 will be released on Friday, November 6, at 8:30 A.M. (EST).

Explanatory Note

This news release presents statistics from two major surveys, the Current Population Survey (household survey) and the Current Employment Statistics Survey (establishment survey). The household survey provides the information on the labor force, total employment, and unemployment that appears in the A tables, marked HOUSEHOLD DATA. It is a sample survey of about 59,500 households that is conducted by the Bureau of the Census with most of the findings analyzed and published by the Bureau of Labor Statistics (BLS).

The establishment survey provides the information on the employment, hours, and earnings of workers on nonagricultural payrolls that appears in the B tables, marked ESTABLISHMENT DATA. This information is collected from payroll records by BLS in cooperation with State agencies. The sample includes over 290,000 establishments employing over 38 million people.

For both surveys, the data for a given month are actually collected for and relate to a particular week. In the household survey, unless otherwise indicated, it is the calendar week that contains the 12th day of the month, which is called the survey week. In the establishment survey, the reference week is the pay period including the 12th, which may or may not correspond directly to the calendar week.

The data in this release are affected by a number of technical factors, including definitions, survey differences, seasonal adjustments, and the inevitable variance in results between a survey of a sample and a census of the entire population. Each of these factors is explained below.

Coverage, definitions, and differences between surveys

The sample households in the household survey are selected so as to reflect the entire civilian noninstitutional population 16 years of age and older. Each person in a household is classified as employed, unemployed, or not in the labor force. Those who hold more than one job are classified according to the job at which they worked the most hours.

People are classified as *employed* if they did any work at all as paid civilians; worked in their own business or profession or on their own farm; or worked 15 hours or more in an enterprise operated by a member of their family, whether they were paid or not. People are also counted as employed if they were on unpaid leave because of illness, bad weather, disputes between labor and management, or personal reasons. Members of the Armed Forces stationed in the United States are also included in the employed total.

People are classified as *unemployed*, regardless of their eligibility for unemployment benefits or public assistance, if they meet all of the following criteria: They had no employment during the survey week; they were available for work at that time; and they made specific efforts to find employment sometime during the prior 4 weeks. Persons laid off from their former jobs and awaiting recall and those expecting to report to a job within 30 days need not be looking for work to be counted as unemployed.

The *labor force* equals the sum of the number employed and the number unemployed. The *unemployment rate* is the percentage of unemployed people in the labor force (civilian plus the resident Armed Forces). Table A-5 presents a special grouping of seven measures of unemployment based on varying definitions of unemployment and the labor force. The definitions are provided in the table. The most restrictive definition yields U-1 and the most comprehensive yields U-7. The overall unemployment rate is U-5a, while U-5b represents the same measure with a civilian labor force base.

Unlike the household survey, the establishment survey only counts wage and salary employees whose names appear on the payroll records of nonagricultural firms. As a result, there are many differences between the two surveys, among which are the following:

— The household survey, although based on a smaller sample, reflects a larger segment of the population; the establishment survey excludes agriculture, the self-employed, unpaid family workers, private household workers, and members of the resident Armed Forces;

— The household survey includes people on unpaid leave among the employed; the establishment survey does not;

— The household survey is limited to those 16 years of age and older; the establishment survey is not limited by age;

— The household survey has no duplication of individuals, because each individual is counted only once; in the establishment survey, employees working at more than one job or otherwise appearing on more than one payroll would be counted separately for each appearance.

Other differences between the two surveys are described in "Comparing Employment Estimates from Household and Payroll Surveys," which may be obtained from the BLS upon request.

Seasonal adjustment

Over the course of a year, the size of the Nation's labor force and the levels of employment and unemployment undergo sharp fluctuations due to such seasonal events as changes in weather, reduced or expanded production, harvests, major holidays, and the opening and closing of schools. For example, the labor force increases by a large number each June, when schools close and many young people enter the job market. The effect of such seasonal variation can be very large; over the course of a year, for example, seasonality may account for as much as 95 percent of the month-to-month changes in unemployment.

Because these seasonal events follow a more or less regular pattern each year, their influence on statistical trends can be eliminated by adjusting the statistics from month to month. These adjustments make nonseasonal developments, such as declines in economic activity or increases in the participation of women in the labor force, easier to spot. To return to the school's-out example, the large number of people entering the labor force each June is likely to obscure any other changes that have taken place since May, making it difficult to determine if the level of economic activity has risen or declined. However, because the effect of students finishing school in previous years is known, the statistics for the current year can be adjusted to allow for a comparable change. Insofar as the seasonal adjustment is made correctly, the adjusted figure provides a more useful tool with which to analyze changes in economic activity.

Measures of labor force, employment, and unemployment contain components such as age and sex. Statistics for all employees, production workers, average weekly hours, and average hourly earnings include components based on the employer's industry. All these statistics can be seasonally adjusted either by adjusting the total or by adjusting each of the components and combining them. The second procedure usually yields more accurate information and is therefore followed by BLS. For example, the seasonally adjusted figure for the labor force is the sum of eight seasonally adjusted civilian employment components, plus the resident Armed Forces total (not adjusted for seasonality), and four seasonally adjusted unemployment components; the total for unemployment is the sum of the four unemployment components; and the overall unemployment rate is derived by dividing the resulting estimate of total unemployment by the estimate of the labor force.

The numerical factors used to make the seasonal adjustments are recalculated regularly. For the household survey, the factors are calculated for the January-June period and again for the July-December period. The January revision is applied to data that have been published over the previous 5 years. For the establishment survey, updated factors for seasonal adjustment are calculated only once a year, along with the introduction of new benchmarks which are discussed at the end of the next section.

Sampling variability

Statistics based on the household and establishment surveys are subject to sampling error, that is, the estimate of the number of people employed and the other estimates drawn from these surveys probably differ from the figures that would be obtained from a complete census, even if the same questionnaires and procedures were used. In the household survey, the amount of the differences can be expressed in terms of standard errors. The numerical value of a standard error depends upon the size of the sample, the results of the survey, and other factors. However, the numerical value is always such that the chances are approximately 68 out of 100 that an estimate based on the sample will differ by no more than the standard error from the results of a complete census. The chances are approximately 90 out of 100 that an estimate based on the sample will differ by no more than 1.6 times the standard error from the results of a complete census. At approximately the 90-percent level of confidence—the confidence limits used by BLS in its analyses—the error for the monthly change in total employment is on the order of plus or minus 328,000; for total unemployment it is 220,000; and, for the overall unemployment rate, it is 0.19 percentage point. These figures do not mean that the sample results are off by these magnitudes but, rather, that the chances are approximately 90 out of 100 that the "true" level or rate would not be expected to differ from the estimates by more than these amounts.

Sampling errors for monthly surveys are reduced when the data are cumulated for several months, such as quarterly or annually. Also, as a general rule, the smaller the estimate, the larger the sampling error. Therefore, relatively speaking, the estimate of the size of the labor force is subject to less error than is the estimate of the number unemployed. And, among the unemployed, the sampling error for the jobless rate of adult men, for example, is much smaller than is the error for the jobless rate of teenagers. Specifically, the error on monthly change in the jobless rate for men is .26 percentage point; for teenagers, it is 1.25 percentage points.

In the establishment survey, estimates for the 2 most current months are based on incomplete returns; for this reason, these estimates are labeled preliminary in the tables. When all the returns in the sample have been received, the estimates are revised. In other words, data for the month of September are published in preliminary form in October and November and in final form in December. To remove errors that build up over time, a comprehensive count of the employed is conducted each year. The results of this survey are used to establish new benchmarks—comprehensive counts of employment—against which month-to-month changes can be measured. The new benchmarks also incorporate changes in the classification of industries and allow for the formation of new establishments.

Additional statistics and other information

In order to provide a broad view of the Nation's employment situation, BLS regularly publishes a wide variety of data in this news release. More comprehensive statistics are contained in *Employment and Earnings*, published each month by BLS. It is available for $8.50 per issue or $22.00 per year from the U.S. Government Printing Office, Washington, D.C., 20204. A check or money order made out to the Superintendent of Documents must accompany all orders.

Employment and Earnings also provides approximations of the standard errors for the household survey data published in this release. For unemployment and other labor force categories, the standard errors appear in tables B through J of its "Explanatory Notes." Measures of the reliability of the data drawn from the establishment survey and the actual amounts of revision due to benchmark adjustments are provided in tables M, O, P, and Q of that publication.

Table A-1. Employment status of the population, including Armed Forces in the United States, by sex

(Numbers in thousands)

Employment status and sex	Not seasonally adjusted			Seasonally adjusted[1]					
	Sept 1986	Aug 1987	Sept 1987	Sept 1986	May 1987	June 1987	July 1987	Aug. 1987	Sept 1987
TOTAL									
Noninstitutional population[1]	182,713	184,730	184,904	182,713	184,259	184,421	184,605	184,730	184,904
Labor force[2]	119,960	123,350	121,627	119,988	121,719	121,235	121,672	122,038	121,604
Participation rate[3]	65.7	66.8	65.8	65.7	66.1	65.7	65.9	66.1	65.8
Total employed[2]	111,945	116,263	114,770	111,703	114,173	113,975	114,447	114,817	114,515
Employment-population ratio[4]	61.3	62.9	62.1	61.1	62.0	61.8	62.0	62.2	61.9
Resident Armed Forces	1,716	1,736	1,743	1,716	1,726	1,718	1,720	1,736	1,743
Civilian employed	110,229	114,527	113,027	109,987	112,447	112,257	112,727	113,081	112,772
Agriculture	3,266	3,452	3,277	3,142	3,335	3,178	3,219	3,092	3,170
Nonagricultural industries	106,963	111,075	109,750	106,845	109,112	109,079	109,508	109,989	109,602
Unemployed	8,015	7,088	6,857	8,285	7,546	7,260	7,224	7,221	7,089
Unemployment rate[5]	6.7	5.7	5.6	6.9	6.2	6.0	5.9	5.9	5.8
Not in labor force	62,752	61,380	63,277	62,725	62,540	63,187	62,933	62,700	63,300
Men, 16 years and over									
Noninstitutional population[1]	87,556	88,590	88,683	87,556	88,361	88,442	88,534	88,590	88,683
Labor force[2]	66,979	69,001	67,639	67,128	67,816	67,556	67,656	67,925	67,736
Participation rate[3]	76.5	77.9	76.3	76.7	76.7	76.4	76.4	76.7	76.4
Total employed[2]	62,803	65,305	64,203	62,528	63,562	63,471	63,715	63,918	63,939
Employment-population ratio[4]	71.7	73.7	72.4	71.4	71.9	71.8	72.0	72.1	72.1
Resident Armed Forces	1,560	1,575	1,581	1,560	1,566	1,559	1,561	1,575	1,581
Civilian employed	61,243	63,730	62,622	60,968	61,996	61,912	62,154	62,343	62,358
Unemployed	4,177	3,696	3,437	4,600	4,254	4,085	3,941	4,007	3,798
Unemployment rate[5]	6.2	5.4	5.1	6.9	6.3	6.0	5.8	5.9	5.6
Women, 16 years and over									
Noninstitutional population[1]	95,156	96,140	96,221	95,156	95,898	95,979	96,071	96,140	96,221
Labor force[2]	52,981	54,350	53,987	52,860	53,903	53,679	54,016	54,113	53,868
Participation rate[3]	55.7	56.5	56.1	55.6	56.2	55.9	56.2	56.3	56.0
Total employed[2]	49,142	50,958	50,567	49,175	50,611	50,504	50,733	50,899	50,576
Employment-population ratio[4]	51.6	53.0	52.6	51.7	52.8	52.6	52.8	52.9	52.6
Resident Armed Forces	156	161	162	156	160	159	159	161	162
Civilian employed	48,986	50,797	50,405	49,019	50,451	50,345	50,574	50,738	50,414
Unemployed	3,839	3,392	3,420	3,685	3,292	3,175	3,283	3,213	3,291
Unemployment rate[5]	7.2	6.2	6.3	7.0	6.1	5.9	6.1	5.9	6.1

[1] The population and Armed Forces figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

[2] Includes members of the Armed Forces stationed in the United States.

[3] Labor force as a percent of the noninstitutional population.

[4] Total employment as a percent of the noninstitutional population.

[5] Unemployment as a percent of the labor force (including the resident Armed Forces).

Table A-2. Employment status of the civilian population by sex and age

(Numbers in thousands)

Employment status, sex, and age	Not seasonally adjusted			Seasonally adjusted[1]					
	Sept. 1986	Aug. 1987	Sept. 1987	Sept. 1986	May 1987	June 1987	July 1987	Aug. 1987	Sept. 1987
TOTAL									
Civilian noninstitutional population	180,997	183,002	183,161	180,997	182,533	182,703	182,885	183,002	183,161
Civilian labor force	118,244	121,614	119,884	118,272	119,993	119,517	119,952	120,302	119,861
Participation rate	65.3	66.5	65.5	65.3	65.7	65.4	65.6	65.7	65.4
Employed	110,229	114,527	113,027	109,987	112,447	112,257	112,727	113,081	112,772
Employment-population ratio[2]	60.9	62.6	61.7	60.8	61.6	61.4	61.6	61.8	61.6
Unemployed	8,015	7,088	6,857	8,285	7,546	7,260	7,224	7,221	7,089
Unemployment rate	6.8	5.8	5.7	7.0	6.3	6.1	6.0	6.0	5.9
Men, 20 years and over									
Civilian noninstitutional population	78,722	79,668	79,740	78,722	79,474	79,536	79,625	79,668	79,740
Civilian labor force	61,466	62,516	62,157	61,412	62,156	62,057	62,116	62,053	62,045
Participation rate	78.1	78.5	77.9	78.0	78.3	78.0	78.0	77.9	77.8
Employed	58,036	59,546	59,373	57,607	58,721	58,620	58,793	58,818	58,957
Employment-population ratio[2]	73.7	74.7	74.5	73.2	73.9	73.7	73.8	73.8	73.9
Agriculture	2,374	2,416	2,433	2,286	2,441	2,307	2,343	2,254	2,355
Nonagricultural industries	55,662	57,130	56,941	55,321	56,280	56,313	56,450	56,564	56,601
Unemployed	3,430	2,970	2,783	3,805	3,436	3,437	3,323	3,235	3,089
Unemployment rate	5.6	4.8	4.5	6.2	5.5	5.5	5.4	5.2	5.0
Women, 20 years and over									
Civilian noninstitutional population	87,779	88,605	88,785	87,779	88,464	88,546	88,632	88,605	88,785
Civilian labor force	49,217	49,683	50,182	48,920	49,774	49,714	49,971	49,989	49,882
Participation rate	56.1	56.0	56.5	55.7	56.3	56.1	56.4	56.4	56.2
Employed	46,051	46,840	47,349	45,905	47,094	47,126	47,288	47,325	47,179
Employment-population ratio[2]	52.5	52.8	53.3	52.3	53.2	53.2	53.4	53.4	53.1
Agriculture	646	680	615	614	634	615	619	603	585
Nonagricultural industries	45,405	46,161	46,734	45,291	46,460	46,512	46,669	46,722	46,594
Unemployed	3,167	2,843	2,833	3,015	2,680	2,588	2,683	2,664	2,703
Unemployment rate	6.4	5.7	5.6	6.2	5.4	5.2	5.4	5.3	5.4
Both sexes, 16 to 19 years									
Civilian noninstitutional population	14,496	14,649	14,637	14,496	14,595	14,621	14,628	14,649	14,637
Civilian labor force	7,561	9,415	7,545	7,940	8,063	7,746	7,865	8,260	7,933
Participation rate	52.2	64.3	51.5	54.8	55.2	53.0	53.8	56.4	54.2
Employed	6,143	8,141	6,305	6,475	6,633	6,511	6,647	6,939	6,636
Employment-population ratio[2]	42.4	55.6	43.1	44.7	45.4	44.5	45.4	47.4	45.3
Agriculture	246	356	229	242	261	257	258	236	230
Nonagricultural industries	5,897	7,785	6,076	6,233	6,372	6,254	6,389	6,703	6,406
Unemployed	1,418	1,274	1,240	1,465	1,430	1,235	1,218	1,321	1,297
Unemployment rate	18.8	13.5	16.4	18.5	17.7	15.9	15.5	16.0	16.3

---

[1] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

[2] Civilian employment as a percent of the civilian noninstitutional population.

Table A-3. Employment status of the civilian population by race, sex, age, and Hispanic origin

(Numbers in thousands)

Employment status, race, sex, age, and Hispanic origin	Not seasonally adjusted			Seasonally adjusted[1]					
	Sept. 1986	Aug. 1987	Sept. 1987	Sept. 1986	May 1987	June 1987	July 1987	Aug. 1987	Sept. 1987
WHITE									
Civilian noninstitutional population	155,723	157,134	157,242	155,723	156,811	156,930	157,050	157,134	157,242
Civilian labor force	102,130	104,631	103,295	102,158	103,573	103,106	103,272	103,614	103,278
Participation rate	65.6	66.6	65.7	65.6	66.1	65.7	65.8	65.9	65.7
Employed	96,262	99,482	98,261	96,000	98,050	97,716	97,958	98,299	97,995
Employment-population ratio[2]	61.8	63.3	62.5	61.6	62.5	62.3	62.4	62.6	62.3
Unemployed	5,876	5,149	5,033	6,158	5,524	5,390	5,314	5,315	5,283
Unemployment rate	5.8	4.9	4.9	6.0	5.3	5.2	5.1	5.1	5.1
Men, 20 years and over									
Civilian labor force	53,757	54,558	54,236	53,727	54,314	54,213	54,214	54,164	54,152
Participation rate	78.4	78.8	78.3	78.4	78.6	78.4	78.3	78.2	78.1
Employed	51,204	52,335	52,133	50,845	51,755	51,581	51,682	51,714	51,771
Employment-population ratio[2]	74.7	75.6	75.2	74.2	74.9	74.6	74.7	74.7	74.7
Unemployed	2,553	2,224	2,103	2,882	2,558	2,632	2,532	2,449	2,382
Unemployment rate	4.7	4.1	3.9	5.4	4.7	4.9	4.7	4.5	4.4
Women, 20 years and over									
Civilian labor force	41,804	42,061	42,556	41,547	42,239	42,159	42,280	42,418	42,312
Participation rate	55.5	55.4	56.0	55.2	55.8	55.6	55.7	55.9	55.7
Employed	39,523	40,049	40,557	39,365	40,343	40,318	40,379	40,535	40,395
Employment-population ratio[2]	52.5	52.7	53.4	52.3	53.2	53.2	53.2	53.4	53.2
Unemployed	2,281	2,012	1,999	2,182	1,895	1,841	1,902	1,882	1,917
Unemployment rate	5.5	4.8	4.7	5.3	4.5	4.4	4.5	4.4	4.5
Both sexes, 16 to 19 years									
Civilian labor force	6,577	8,012	6,502	6,884	7,021	6,734	6,778	7,033	6,814
Participation rate	55.3	67.0	54.4	57.9	58.7	56.3	56.6	58.8	57.0
Employed	5,535	7,098	5,571	5,790	5,951	5,817	5,898	6,049	5,829
Employment-population ratio[2]	46.6	59.4	46.6	48.7	49.8	48.6	49.3	50.6	48.8
Unemployed	1,042	913	931	1,094	1,070	917	880	984	985
Unemployment rate	15.8	11.4	14.3	15.9	15.2	13.6	13.0	14.0	14.5
Men	16.0	12.3	14.5	16.6	17.3	14.5	13.0	15.4	15.3
Women	15.7	10.4	14.2	15.1	13.1	12.7	13.0	12.5	13.6
BLACK									
Civilian noninstitutional population	20,056	20,396	20,426	20,056	20,312	20,341	20,373	20,396	20,426
Civilian labor force	12,657	13,393	13,018	12,652	12,860	12,863	13,047	13,194	13,027
Participation rate	63.1	65.7	63.7	63.1	63.3	63.2	64.0	64.7	63.8
Employed	10,785	11,721	11,398	10,799	11,080	11,223	11,401	11,563	11,427
Employment-population ratio[2]	53.8	57.5	55.8	53.8	54.6	55.2	56.0	56.7	55.9
Unemployed	1,872	1,671	1,619	1,853	1,779	1,640	1,647	1,630	1,599
Unemployment rate	14.8	12.5	12.4	14.6	13.8	12.7	12.6	12.4	12.3
Men, 20 years and over									
Civilian labor force	5,915	6,121	6,039	5,906	6,033	6,001	6,089	6,079	6,025
Participation rate	74.5	75.8	74.6	74.4	75.0	74.5	75.4	75.2	74.4
Employed	5,160	5,491	5,463	5,116	5,279	5,311	5,404	5,431	5,425
Employment-population ratio[2]	65.0	68.0	67.5	64.5	65.6	65.9	66.9	67.2	67.0
Unemployed	755	630	576	790	754	690	686	647	600
Unemployment rate	12.8	10.3	9.5	13.4	12.5	11.5	11.3	10.7	10.0
Women, 20 years and over									
Civilian labor force	5,925	6,118	6,116	5,872	5,970	6,017	6,125	6,120	6,074
Participation rate	59.4	60.3	60.2	58.8	59.1	59.5	60.4	60.3	59.8
Employed	5,147	5,379	5,345	5,145	5,278	5,349	5,426	5,428	5,350
Employment-population ratio[2]	51.6	53.0	52.6	51.5	52.2	52.9	53.5	53.5	52.7
Unemployed	778	739	771	727	691	669	699	692	723
Unemployment rate	13.1	12.1	12.6	12.4	11.6	11.1	11.4	11.3	11.9
Both sexes, 16 to 19 years									
Civilian labor force	817	1,154	863	874	857	844	833	995	928
Participation rate	38.2	53.2	39.8	40.9	39.7	39.0	38.4	45.9	42.7
Employed	479	852	591	538	523	563	571	704	652
Employment-population ratio[2]	22.4	39.3	27.2	25.2	24.2	26.0	26.3	32.5	30.0
Unemployed	339	302	272	336	334	281	262	291	276
Unemployment rate	41.4	26.2	31.5	38.4	39.0	33.3	31.5	29.2	29.7
Men	41.5	28.1	32.9	38.6	40.3	31.5	31.5	32.6	30.9
Women	41.4	24.0	30.2	38.3	37.6	35.1	31.4	25.3	28.7
HISPANIC ORIGIN									
Civilian noninstitutional population	12,432	12,925	12,965	12,432	12,809	12,848	12,887	12,925	12,965
Civilian labor force	8,210	8,688	8,595	8,179	8,586	8,452	8,411	8,544	8,568
Participation rate	66.0	67.2	66.3	65.8	67.0	65.8	65.3	66.1	66.1
Employed	7,351	8,013	7,924	7,286	7,838	7,730	7,744	7,864	7,869
Employment-population ratio[2]	59.1	62.0	61.1	58.6	61.2	60.2	60.1	60.8	60.7
Unemployed	859	675	672	893	748	722	667	680	699
Unemployment rate	10.5	7.8	7.8	10.9	8.7	8.5	7.9	8.0	8.2

[1] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

[2] Civilian employment as a percent of the civilian noninstitutional population.

NOTE: Detail for the above race and Hispanic-origin groups will not sum to totals because data for the "other races" group are not presented and Hispanics are included in both the white and black population groups.

Table A-4. Selected employment indicators

(In thousands)

Category	Not seasonally adjusted			Seasonally adjusted					
	Sept. 1986	Aug. 1987	Sept. 1987	Sept. 1986	May 1987	June 1987	July 1987	Aug. 1987	Sept. 1987
CHARACTERISTIC									
Civilian employed, 16 years and over	110,229	114,527	113,027	109,987	112,447	112,257	112,727	113,081	112,772
Married men, spouse present	40,019	40,542	40,693	39,691	40,029	40,057	40,241	40,260	40,370
Married women, spouse present	27,384	27,660	28,324	27,249	28,495	28,458	28,426	28,196	27,988
Women who maintain families	5,850	6,059	6,084	5,926	5,921	5,939	6,013	6,108	6,164
MAJOR INDUSTRY AND CLASS OF WORKER									
Agriculture:									
Wage and salary workers	1,585	1,781	1,670	1,521	1,695	1,614	1,619	1,566	1,615
Self-employed workers	1,525	1,472	1,477	1,460	1,442	1,386	1,429	1,363	1,417
Unpaid family workers	155	198	130	159	170	165	154	159	134
Nonagricultural industries:									
Wage and salary workers	98,714	102,423	101,229	98,692	100,834	100,420	100,838	101,334	101,221
Government	16,274	16,140	16,864	16,333	16,710	16,956	16,931	16,760	16,915
Private industries	82,440	86,281	84,365	82,359	84,124	83,464	83,907	84,574	84,306
Private households	1,235	1,273	1,088	1,229	1,266	1,146	1,224	1,172	1,088
Other industries	81,205	85,008	83,277	81,130	82,858	82,318	82,683	83,402	83,218
Self-employed workers	7,975	8,397	8,217	7,939	8,142	8,328	8,205	8,216	8,184
Unpaid family workers	275	256	303	275	275	274	268	250	300
PERSONS AT WORK PART TIME[1]									
All industries:									
Part time for economic reasons	5,245	5,694	4,937	5,544	5,282	5,184	5,508	5,262	5,241
Slack work	2,319	2,417	2,070	2,472	2,223	2,317	2,456	2,515	2,212
Could only find part-time work	2,573	2,900	2,497	2,772	2,665	2,579	2,722	2,494	2,702
Voluntary part time	14,109	11,590	14,485	13,922	14,573	15,054	14,422	14,634	14,313
Nonagricultural industries:									
Part time for economic reasons	4,991	5,373	4,650	5,303	5,029	4,918	5,235	4,998	4,968
Slack work	2,162	2,207	1,899	2,314	2,071	2,155	2,295	2,306	2,038
Could only find part-time work	2,484	2,803	2,405	2,710	2,594	2,477	2,634	2,433	2,628
Voluntary part time	13,643	11,136	14,041	13,520	14,069	14,485	13,946	14,168	13,930

[1] Excludes persons "with a job but not at work" during the survey period for such reasons as vacation, illness, or industrial dispute.

Table A-5. Range of unemployment measures based on varying definitions of unemployment and the labor force, seasonally adjusted

(Percent)

Measure	Quarterly averages					Monthly data		
	1986		1987			1987		
	III	IV	I	II	III	July	Aug.	Sept.
U-1 Persons unemployed 15 weeks or longer as a percent of the civilian labor force	1.9	1.8	1.8	1.7	1.6	1.6	1.6	1.6
U-2 Job losers as a percent of the civilian labor force	3.4	3.3	3.3	3.0	2.8	2.9	2.8	2.8
U-3 Unemployed persons 25 years and over as a percent of the civilian labor force	5.4	5.4	5.1	4.7	4.6	4.7	4.7	4.6
U-4 Unemployed full-time jobseekers as a percent of the full-time civilian labor force	6.6	6.5	6.3	5.9	5.6	5.7	5.6	5.4
U-5a Total unemployed as a percent of the labor force, including the resident Armed Forces	6.8	6.8	6.6	6.1	5.9	5.9	5.9	5.8
U-5b Total unemployed as a percent of the civilian labor force	6.9	6.9	6.7	6.2	6.0	6.0	6.0	5.9
U-6 Total full-time jobseekers plus 1/2 part-time jobseekers plus 1/2 total on part time for economic reasons as a percent of the civilian labor force less 1/2 of the part-time labor force	9.3	9.2	9.0	8.4	8.2	8.3	8.2	8.0
U-7 Total full-time jobseekers plus 1/2 part-time jobseekers plus 1/2 total on part time for economic reasons plus discouraged workers as a percent of the civilian labor force plus discouraged workers less 1/2 of the part-time labor force	10.2	10.2	10.0	9.3	9.0	N.A.	N.A.	N.A.

N.A. = not available.

Table A-6. Selected unemployment indicators, seasonally adjusted

Category	Number of unemployed persons (in thousands)			Unemployment rates[1]					
	Sept. 1986	Aug. 1987	Sept. 1987	Sept. 1986	May 1987	June 1987	July 1987	Aug. 1987	Sept. 1987
CHARACTERISTIC									
Total, 16 years and over	8,285	7,221	7,089	7.0	6.3	6.1	6.0	6.0	5.9
Men, 16 years and over	4,600	4,007	3,798	7.0	6.4	6.2	6.0	6.0	5.7
Men, 20 years and over	3,805	3,235	3,089	6.2	5.5	5.5	5.4	5.2	5.0
Women, 16 years and over	3,685	3,213	3,291	7.0	6.1	5.9	6.1	6.0	6.1
Women, 20 years and over	3,015	2,664	2,703	6.2	5.4	5.2	5.4	5.3	5.4
Both sexes, 16 to 19 years	1,465	1,321	1,297	18.5	17.7	15.9	15.5	16.0	16.3
Married men, spouse present	1,780	1,526	1,523	4.3	3.9	4.0	3.8	3.7	3.6
Married women, spouse present	1,455	1,268	1,219	5.1	4.1	4.0	4.2	4.3	4.2
Women who maintain families	646	608	597	9.8	9.6	9.7	9.4	9.0	8.8
Full-time workers	6,739	5,783	5,587	6.6	5.9	5.9	5.7	5.6	5.4
Part-time workers	1,551	1,433	1,473	9.3	8.7	6.9	7.9	8.2	8.5
Labor force time lost[2]	--	--	--	7.9	7.2	7.1	6.9	6.8	6.7
INDUSTRY									
Nonagricultural private wage and salary workers	6,175	5,339	5,300	7.0	6.3	6.2	6.1	5.9	5.9
Mining	132	78	59	13.9	12.9	10.8	7.8	8.9	7.0
Construction	805	706	752	12.9	12.1	11.6	10.7	11.2	12.1
Manufacturing	1,541	1,205	1,251	7.0	6.4	5.6	6.0	5.5	5.7
Durable goods	859	714	727	6.5	6.3	5.3	6.1	5.5	5.6
Nondurable goods	682	491	524	7.7	6.6	6.0	5.9	5.5	5.9
Transportation and public utilities	292	266	245	4.7	4.4	5.0	4.4	4.3	4.0
Wholesale and retail trade	1,702	1,615	1,456	7.6	6.9	7.2	6.8	7.0	6.4
Finance and service industries	1,703	1,470	1,537	5.6	4.8	4.8	5.1	4.6	4.9
Government workers	591	673	600	3.5	3.3	3.4	3.4	3.9	3.4
Agricultural wage and salary workers	225	191	147	12.9	8.7	8.8	11.3	10.8	8.3

[1] Unemployment as a percent of the civilian labor force.

[2] Aggregate hours lost by the unemployed and persons on part time for economic reasons as a percent of potentially available labor force hours.

Table A-7. Duration of unemployment

(Numbers in thousands)

Weeks of unemployment	Not seasonally adjusted			Seasonally adjusted					
	Sept. 1986	Aug. 1987	Sept. 1987	Sept. 1986	May 1987	June 1987	July 1987	Aug. 1987	Sept. 1987
DURATION									
Less than 5 weeks	3,594	3,101	3,391	3,415	3,349	3,085	3,168	3,197	3,230
5 to 14 weeks	2,323	2,305	1,764	2,524	2,118	2,114	2,141	2,170	1,932
15 weeks and over	2,097	1,682	1,701	2,373	2,101	2,055	1,907	1,884	1,920
15 to 26 weeks	908	642	744	1,110	1,003	998	945	814	909
27 weeks and over	1,190	1,040	957	1,263	1,098	1,057	962	1,070	1,011
Average (mean) duration, in weeks	15.0	14.2	13.9	15.5	14.9	14.8	14.6	14.3	14.2
Median duration, in weeks	6.3	6.4	5.1	7.1	6.5	6.7	6.7	6.4	5.7
PERCENT DISTRIBUTION									
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than 5 weeks	44.8	43.8	49.5	41.1	44.3	42.5	43.9	44.1	45.6
5 to 14 weeks	29.0	32.5	25.7	30.4	28.0	29.1	29.7	29.9	27.3
15 weeks and over	26.2	23.7	24.8	28.5	27.8	28.3	26.4	26.0	27.1
15 to 26 weeks	11.3	9.1	10.9	13.4	13.2	13.8	13.1	11.2	12.8
27 weeks and over	14.8	14.7	14.0	15.2	14.5	14.6	13.3	14.8	14.3

Table A-8. Reason for unemployment

(Numbers in thousands)

Reason	Not seasonally adjusted			Seasonally adjusted					
	Sept. 1986	Aug. 1987	Sept. 1987	Sept. 1986	May 1987	June 1987	July 1987	Aug. 1987	Sept. 1987
NUMBER OF UNEMPLOYED									
Job losers	3,619	3,145	2,942	4,044	3,611	3,565	3,522	3,339	3,321
On layoff	824	730	643	1,029	906	901	918	850	810
Other job losers	2,795	2,415	2,299	3,015	2,705	2,664	2,604	2,489	2,511
Job leavers	1,135	1,062	1,086	1,041	906	949	1,007	1,006	995
Reentrants	2,241	1,991	1,975	2,145	2,018	1,969	1,913	1,997	1,885
New entrants	1,021	890	854	1,038	1,018	798	801	829	883
PERCENT DISTRIBUTION									
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Job losers	45.2	44.4	42.9	48.9	47.8	49.0	48.6	46.6	46.9
On layoff	10.3	10.3	9.4	12.4	12.0	12.4	12.7	11.9	11.4
Other job losers	34.9	34.1	33.5	36.5	35.8	36.6	36.0	34.7	35.4
Job leavers	14.2	15.0	15.8	12.6	12.0	13.0	13.9	14.0	14.0
Reentrants	28.0	28.1	28.8	25.9	26.7	27.0	26.4	27.9	26.6
New entrants	12.7	12.6	12.5	12.6	13.5	11.0	11.1	11.6	12.5
UNEMPLOYED AS A PERCENT OF THE CIVILIAN LABOR FORCE									
Job losers	3.1	2.6	2.4	3.4	3.0	3.0	2.9	2.8	2.8
Job leavers	1.0	.9	.9	.9	.8	.8	.8	.8	.8
Reentrants	1.9	1.6	1.6	1.8	1.7	1.6	1.6	1.7	1.6
New entrants	.9	.7	.7	.9	.8	.7	.7	.7	.7

Table A-9. Unemployed persons by sex and age, seasonally adjusted

Sex and age	Number of unemployed persons (in thousands)			Unemployment rates[1]					
	Sept. 1986	Aug. 1987	Sept. 1987	Sept. 1986	May 1987	June 1987	July 1987	Aug. 1987	Sept. 1987
Total, 16 years and over	8,285	7,221	7,089	7.0	6.3	6.1	6.0	6.0	5.9
16 to 24 years	3,173	2,685	2,675	13.6	12.6	12.2	11.7	11.6	11.7
16 to 19 years	1,465	1,321	1,297	18.5	17.7	15.9	15.5	16.0	16.3
16 to 17 years	668	636	570	20.0	21.4	18.8	17.1	18.0	17.4
18 to 19 years	790	691	707	17.2	15.0	13.7	13.9	14.7	15.4
20 to 24 years	1,708	1,364	1,378	11.1	9.8	10.2	9.8	9.1	9.3
25 years and over	5,130	4,564	4,433	5.4	4.8	4.6	4.7	4.7	4.6
25 to 54 years	4,523	4,072	3,901	5.6	5.0	4.9	5.0	5.0	4.7
55 years and over	587	479	502	4.0	3.7	3.2	3.1	3.2	3.4
Men, 16 years and over	4,680	4,007	3,798	7.0	6.4	6.2	6.0	6.0	5.7
16 to 24 years	1,761	1,498	1,416	14.3	13.4	12.6	11.9	12.4	11.9
16 to 19 years	795	772	709	19.1	20.0	16.4	15.5	18.0	17.3
16 to 17 years	373	374	309	21.0	23.2	18.7	16.6	20.6	18.3
18 to 19 years	416	400	387	17.5	17.7	14.4	13.8	16.3	16.0
20 to 24 years	966	726	707	11.9	10.0	10.7	10.6	9.3	9.1
25 years and over	2,857	2,543	2,402	5.4	4.9	4.7	4.7	4.7	4.4
25 to 54 years	2,472	2,232	2,101	5.5	5.1	5.0	4.9	4.9	4.6
55 years and over	364	300	276	4.2	4.1	3.4	3.4	3.4	3.3
Women, 16 years and over	3,605	3,213	3,291	7.0	6.1	5.9	6.1	6.0	6.1
16 to 24 years	1,412	1,107	1,259	12.8	11.7	11.7	11.6	10.7	11.6
16 to 19 years	670	549	588	17.7	15.4	15.4	15.4	13.9	15.4
16 to 17 years	295	262	269	18.8	19.6	18.9	17.7	15.3	14.5
18 to 19 years	374	291	320	16.9	12.4	13.0	14.0	12.9	14.6
20 to 24 years	742	638	671	10.2	9.7	9.7	9.5	8.9	9.5
25 years and over	2,273	2,022	2,031	5.5	4.7	4.4	4.7	4.7	4.7
25 to 54 years	2,051	1,839	1,800	5.8	4.9	4.7	5.0	5.0	4.9
55 years and over	223	179	226	3.6	3.0	2.8	3.6	2.9	3.7

[1] Unemployment as a percent of the civilian labor force.

Table A-10. Employment status of black and other workers

(Numbers in thousands)

Employment status	Not seasonally adjusted			Seasonally adjusted[1]					
	Sept. 1986	Aug. 1987	Sept. 1987	Sept. 1986	May 1987	June 1987	July 1987	Aug. 1987	Sept. 1987
Civilian noninstitutional population	25,274	25,868	25,919	25,274	25,723	25,773	25,826	25,868	25,919
Civilian labor force	16,106	16,984	16,589	16,072	16,464	16,439	16,632	16,705	16,566
Participation rate	63.7	65.7	64.0	63.6	64.0	63.8	64.4	64.6	63.9
Employed	13,967	15,045	14,766	13,964	14,454	14,566	14,750	14,812	14,774
Employment-population ratio[2]	55.3	58.2	57.0	55.3	56.2	56.5	57.1	57.3	57.0
Unemployed	2,139	1,939	1,824	2,108	2,011	1,873	1,882	1,893	1,792
Unemployment rate	13.3	11.4	11.0	13.1	12.2	11.4	11.3	11.3	10.8
Not in labor force	9,168	8,884	9,330	9,202	9,259	9,334	9,194	9,163	9,353

[1] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

[2] Civilian employment as a percent of the civilian noninstitutional population.

Table A-11. Occupational status of the employed and unemployed, not seasonally adjusted

(Numbers in thousands)

Occupation	Civilian employed		Unemployed		Unemployment rate	
	Sept. 1986	Sept. 1987	Sept. 1986	Sept. 1987	Sept. 1986	Sept. 1987
Total, 16 years and over[1]	110,229	113,027	8,015	6,857	6.8	5.7
Managerial and professional specialty	26,903	28,107	735	689	2.7	2.4
Executive, administrative, and managerial	12,886	13,692	386	374	2.9	2.7
Professional specialty	14,014	14,415	350	315	2.4	2.1
Technical, sales, and administrative support	34,414	35,080	1,784	1,622	4.9	4.4
Technicians and related support	3,532	3,432	106	112	2.9	3.1
Sales occupations	13,171	13,470	744	670	5.3	4.7
Administrative support, including clerical	17,711	18,177	934	840	5.0	4.4
Service occupations	14,426	14,754	1,360	1,197	8.6	7.5
Private household	933	816	84	44	8.3	5.1
Protective service	1,678	1,856	97	102	5.5	5.2
Service, except private household and protective	11,816	12,082	1,179	1,051	9.1	8.0
Precision production, craft, and repair	13,589	13,714	864	742	6.0	5.1
Mechanics and repairers	4,405	4,541	199	162	4.3	3.4
Construction trades	5,078	5,047	401	393	7.3	7.2
Other precision production, craft, and repair	4,106	4,126	264	187	6.0	4.3
Operators, fabricators, and laborers	17,285	17,796	1,925	1,502	10.0	7.8
Machine operators, assemblers, and inspectors	7,992	8,163	857	657	9.7	7.4
Transportation and material moving occupations	4,599	4,785	325	277	6.6	5.5
Handlers, equipment cleaners, helpers, and laborers	4,694	4,847	743	568	13.7	10.5
Construction laborers	835	829	188	151	18.4	15.4
Other handlers, equipment cleaners, helpers, and laborers	3,859	4,018	555	418	12.6	9.4
Farming, forestry, and fishing	3,613	3,577	260	219	6.7	5.8

[1] Persons with no previous work experience and those whose last job was in the Armed Forces are included in the unemployed total.

Table A-12. Employment status of male Vietnam-era veterans and nonveterans by age, not seasonally adjusted

(Numbers in thousands)

Veteran status and age	Civilian noninstitutional population		Civilian labor force							
			Total		Employed		Unemployed			
							Number		Percent of labor force	
	Sept. 1986	Sept. 1987	Sept. 1986	Sept. 1987	Sept. 1986	Sept. 1987	Sept. 1986	Sept. 1987	Sept. 1986	Sept. 1987
VIETNAM-ERA VETERANS										
Total, 30 years and over	7,768	7,850	7,199	7,227	6,877	6,923	322	304	4.5	4.2
30 to 44 years	6,359	6,156	6,086	5,842	5,793	5,581	293	261	4.8	4.5
30 to 34 years	1,102	875	1,037	826	975	759	62	67	6.0	8.1
35 to 39 years	2,971	2,515	2,857	2,385	2,710	2,283	147	102	5.1	4.3
40 to 44 years	2,286	2,766	2,192	2,631	2,108	2,539	84	92	3.8	3.5
45 years and over	1,409	1,694	1,113	1,385	1,084	1,342	29	43	2.6	3.1
NONVETERANS										
Total, 30 to 44 years	19,148	19,666	18,176	18,693	17,302	17,977	874	716	4.8	3.8
30 to 34 years	8,935	8,935	8,520	8,515	8,096	8,178	424	337	5.0	4.0
35 to 39 years	6,015	6,304	5,711	6,020	5,441	5,796	270	224	4.7	3.7
40 to 44 years	4,198	4,427	3,945	4,158	3,765	4,003	180	155	4.6	3.7

NOTE: Male Vietnam-era veterans are men who served in the Armed Forces between August 5, 1964 and May 7, 1975. Nonveterans are men who have never served in the Armed Forces; published data are limited to those 30 to 44 years of age, the group that most closely corresponds to the bulk of the Vietnam-era veteran population.

Table A-13. Employment status of the civilian population for eleven large States

(Numbers in thousands)

State and employment status	Not seasonally adjusted[1]			Seasonally adjusted[2]					
	Sept 1986	Aug 1987	Sept 1987	Sept 1986	May 1987	June 1987	July 1987	Aug 1987	Sept 1987
California									
Civilian noninstitutional population	20.205	20.624	20.660	20.205	20.516	20.553	20.592	20.624	20.660
Civilian labor force	13.474	13.891	13.804	13.492	13.917	13.742	13.819	13.775	13.823
Employed	12.641	13.141	13.039	12.623	13.070	12.989	13.064	13.036	13.026
Unemployed	833	751	765	869	847	753	755	739	797
Unemployment rate	6.2	5.4	5.5	6.4	6.1	5.5	5.5	5.4	5.8
Florida									
Civilian noninstitutional population	9.222	9.460	9.480	9.222	9.398	9.419	9.441	9.460	9.480
Civilian labor force	5.615	5.925	5.902	5.574	5.881	5.840	5.899	5.851	5.868
Employed	5.263	5.589	5.591	5.242	5.562	5.546	5.587	5.519	5.574
Unemployed	352	336	311	332	319	294	312	332	294
Unemployment rate	6.3	5.7	5.3	6.0	5.4	5.0	5.3	5.7	5.0
Illinois									
Civilian noninstitutional population	8.662	8.686	8.687	8.662	8.682	8.684	8.687	8.686	8.687
Civilian labor force	5.720	5.865	5.804	5.729	5.680	5.727	5.778	5.819	5.804
Employed	5.272	5.466	5.448	5.265	5.201	5.297	5.356	5.409	5.434
Unemployed	448	399	355	464	479	430	422	410	370
Unemployment rate	7.8	6.8	6.1	8.1	8.4	7.5	7.3	7.0	6.4
Massachusetts									
Civilian noninstitutional population	4.555	4.573	4.574	4.555	4.570	4.571	4.573	4.573	4.574
Civilian labor force	3.052	3.153	3.053	3.052	3.069	3.114	3.069	3.097	3.051
Employed	2.920	3.065	2.969	2.929	2.954	3.015	2.993	3.005	2.975
Unemployed	132	89	84	123	115	99	76	92	76
Unemployment rate	4.3	2.8	2.8	4.0	3.7	3.2	2.5	3.0	2.5
Michigan									
Civilian noninstitutional population	6.873	6.934	6.939	6.873	6.920	6.925	6.931	6.934	6.939
Civilian labor force	4.355	4.686	4.576	4.386	4.486	4.513	4.503	4.638	4.606
Employed	3.996	4.296	4.242	3.998	4.124	4.124	4.129	4.231	4.246
Unemployed	360	389	333	388	362	389	374	407	360
Unemployment rate	8.3	8.3	7.3	8.8	8.1	8.6	8.3	8.8	7.8
New Jersey									
Civilian noninstitutional population	5.934	5.990	5.994	5.934	5.977	5.981	5.987	5.990	5.994
Civilian labor force	3.886	4.022	3.884	3.918	4.003	3.977	3.930	3.986	3.916
Employed	3.720	3.867	3.732	3.729	3.836	3.809	3.771	3.815	3.740
Unemployed	165	155	153	189	167	168	159	171	176
Unemployment rate	4.3	3.9	3.9	4.8	4.2	4.2	4.0	4.3	4.5
New York									
Civilian noninstitutional population	13.739	13.781	13.784	13.739	13.774	13.777	13.782	13.781	13.784
Civilian labor force	8.438	8.669	8.395	8.434	8.491	8.535	8.481	8.526	8.392
Employed	7.945	8.292	8.027	7.929	8.082	8.145	8.106	8.145	8.012
Unemployed	493	376	369	505	409	390	375	381	380
Unemployment rate	5.8	4.3	4.4	6.0	4.8	4.6	4.4	4.5	4.5
North Carolina									
Civilian noninstitutional population	4.773	4.848	4.854	4.773	4.829	4.836	4.843	4.848	4.854
Civilian labor force	3.196	3.351	3.303	3.207	3.240	3.292	3.322	3.306	3.313
Employed	3.038	3.211	3.187	3.034	3.101	3.143	3.171	3.165	3.182
Unemployed	158	140	116	173	139	149	151	141	131
Unemployment rate	5.0	4.2	3.5	5.4	4.3	4.5	4.5	4.3	4.0
Ohio									
Civilian noninstitutional population	8.110	8.136	8.137	8.110	8.131	8.133	8.136	8.136	8.137
Civilian labor force	5.189	5.272	5.171	5.163	5.294	5.237	5.240	5.205	5.148
Employed	4.755	4.908	4.885	4.734	4.878	4.859	4.868	4.841	4.865
Unemployed	434	364	287	429	416	378	372	364	283
Unemployment rate	8.4	6.9	5.5	8.3	7.9	7.2	7.1	7.0	5.5
Pennsylvania									
Civilian noninstitutional population	9.246	9.283	9.286	9.246	9.276	9.279	9.283	9.283	9.286
Civilian labor force	5.677	5.829	5.708	5.646	5.621	5.630	5.616	5.697	5.675
Employed	5.312	5.526	5.411	5.264	5.319	5.310	5.295	5.383	5.359
Unemployed	364	303	297	382	302	320	321	314	316
Unemployment rate	6.4	5.2	5.2	6.8	5.4	5.7	5.7	5.5	5.6
Texas									
Civilian noninstitutional population	12.034	12.246	12.264	12.034	12.192	12.211	12.231	12.246	12.264
Civilian labor force	8.227	8.590	8.430	8.202	8.511	8.372	8.456	8.546	8.401
Employed	7.478	7.880	7.713	7.454	7.778	7.656	7.753	7.828	7.685
Unemployed	749	710	717	748	733	716	703	718	716
Unemployment rate	9.1	8.3	8.5	9.1	8.6	8.6	8.3	8.4	8.5

---

[1] These are the official Bureau of Labor Statistics' estimates used in the administration of Federal fund allocation programs.

[2] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and the seasonally adjusted columns.

Table A-14. Persons not in the labor force by reason, sex, and race, quarterly averages

(In thousands)

Reason, sex, and race	Not seasonally adjusted		Seasonally adjusted				
	1986	1987	1986		1987		1987
	III	III	III	IV	I	II	III
TOTAL							
Total not in labor force	61,496	61,815	62,664	62,887	62,800	62,912	62,978
Do not want a job now	55,875	56,366	56,865	57,013	57,096	57,025	57,565
Current activity: Going to school	3,433	3,521	6,189	6,330	6,428	6,446	6,417
Ill, disabled	4,084	4,423	4,087	3,928	4,152	4,168	4,454
Keeping house	26,110	25,588	26,176	26,000	26,290	25,488	25,643
Retired	16,029	16,550	15,885	16,069	15,768	16,266	16,363
Other activity	6,218	6,285	4,528	4,686	4,456	4,657	4,687
Want a job now	5,622	5,449	5,980	5,808	5,823	5,924	5,854
Reason not looking: School attendance	885	882	1,578	1,427	1,342	1,473	1,598
Ill health, disability	896	834	903	746	842	948	843
Home responsibilities	1,323	1,388	1,203	1,347	1,222	1,351	1,266
Think cannot get a job	1,178	1,025	1,150	1,127	1,168	1,037	1,011
Job-market factors[1]	763	651	736	851	756	688	628
Personal factors[2]	415	374	414	277	412	349	383
Other reasons[3]	1,340	1,320	1,145	1,160	1,249	1,115	1,136
Men							
Total not in labor force	19,577	19,946	20,469	20,454	20,408	20,699	20,833
Do not want a job now	17,817	18,196	18,382	18,428	18,434	18,660	19,004
Want a job now	1,760	1,750	2,087	2,026	2,005	2,068	2,075
Reason not looking: School attendance	448	407	824	680	652	767	779
Ill health, disability	433	404	438	359	396	484	413
Think cannot get a job	430	433	425	497	490	409	434
Other reasons[3]	449	506	399	490	467	408	449
Women							
Total not in labor force	41,919	41,869	42,204	42,354	42,392	42,213	42,145
Do not want a job now	38,057	38,170	38,483	38,559	38,660	38,[illegible]	38,561
Want a job now	3,862	3,699	3,893	3,782	3,819	3,857	3,778
Reason not looking: School attendance	437	475	754	747	690	707	818
Ill health, disability	463	430	465	387	447	464	430
Home responsibilities	1,323	1,388	1,203	1,347	1,222	1,351	1,266
Think cannot get a job	747	592	725	630	678	628	577
Other reasons	891	815	746	670	782	707	687
White							
Total not in labor force	52,562	52,841	53,511	53,564	53,623	53,615	53,757
Do not want a job now	48,428	48,761	49,208	49,347	49,450	49,265	49,452
Want a job now	4,135	4,099	4,298	4,217	4,195	4,398	4,305
Reason not looking: School attendance	583	607	1,065	975	933	1,106	1,127
Ill health, disability	625	638	625	536	611	697	645
Home responsibilities	1,014	1,061	898	975	907	993	936
Think cannot get a job	821	664	780	817	800	702	631
Other reasons[3]	1,092	1,129	931	914	944	901	966
Black							
Total not in labor force	7,207	7,105	7,423	7,405	7,381	7,488	7,309
Do not want a job now	5,930	5,992	6,027	6,020	5,945	6,206	6,088
Want a job now	1,277	1,113	1,425	1,423	1,436	1,299	1,219
Reason not looking: School attendance	259	198	460	381	353	308	339
Ill health, disability	239	160	248	192	229	194	170
Home responsibilities	278	281	263	318	287	319	264
Think cannot get a job	296	318	275	291	342	304	313
Other reasons[3]	206	156	179	241	224	175	133

---

[1] Job market factors include "could not find job" and "thinks no job available."

[2] Personal factors include "employers think too young or old," "lacks education or training," and "other personal handicap."

[3] Includes small number of men not looking for work because of "home responsibilities."

Table B-1. Employees on nonagricultural payrolls by industry

(In thousands)

Industry	Not seasonally adjusted				Seasonally adjusted					
	Sept. 1986	July 1987	Aug. 1987 p	Sept. 1987 p	Sept. 1986	May 1987	June 1987	July 1987	Aug. 1987 p	Sept. 1987 p
Total	100,549	101,947	102,154	102,925	100,039	101,708	101,818	102,126	102,278	102,410
Total private	84,025	85,752	86,103	86,154	83,241	84,677	84,797	85,106	85,226	85,364
Goods-producing	25,111	25,078	25,344	25,401	24,620	24,752	24,761	24,850	24,985	24,912
Mining	740	749	756	757	739	735	738	744	752	756
Oil and gas extraction	415.7	428.0	432.9	431.9	419	420	425	430	434	435
Construction	5,258	5,307	5,367	5,287	4,948	4,999	5,008	5,002	5,007	4,974
General building contractors	1,354.5	1,337.1	1,346.4	1,309.5	1,291	1,267	1,266	1,261	1,263	1,248
Manufacturing	19,113	19,022	19,221	19,357	18,933	19,018	19,015	19,104	19,126	19,182
Production workers	13,017	12,913	13,107	13,263	12,851	12,946	12,958	13,020	13,060	13,099
Durable goods	11,251	11,142	11,235	11,367	11,181	11,175	11,176	11,195	11,244	11,279
Production workers	7,442	7,354	7,452	7,571	7,382	7,409	7,421	7,425	7,478	7,512
Lumber and wood products	736.8	758.9	762.5	760.6	716	738	735	740	737	739
Furniture and fixtures	500.3	504.3	516.2	522.3	499	509	510	518	518	521
Stone, clay, and glass products	598.8	592.6	597.1	597.8	584	584	582	582	583	583
Primary metal industries	731.6	742.9	753.1	768.2	732	742	746	750	754	769
Blast furnaces and basic steel products	258.6	277.9	279.5	283.1	260	272	275	277	279	284
Fabricated metal products	1,435.8	1,408.4	1,423.6	1,440.3	1,424	1,420	1,424	1,424	1,425	1,429
Machinery, except electrical	2,029.4	2,024.7	2,031.1	2,051.5	2,031	2,025	2,028	2,033	2,043	2,054
Electrical and electronic equipment	2,126.8	2,079.2	2,092.5	2,106.3	2,118	2,087	2,080	2,088	2,093	2,098
Transportation equipment	2,022.9	1,974.8	1,990.9	2,024.8	2,015	2,011	2,010	1,995	2,027	2,017
Motor vehicles and equipment	864.9	803.5	818.3	844.1	857	843	842	814	847	837
Instruments and related products	702.8	695.0	695.5	697.9	703	693	693	695	694	698
Miscellaneous manufacturing	365.5	361.2	372.6	377.4	359	366	368	370	370	371
Nondurable goods	7,862	7,880	7,986	8,010	7,752	7,843	7,839	7,909	7,882	7,903
Production workers	5,575	5,559	5,655	5,692	5,469	5,537	5,537	5,595	5,562	5,587
Food and kindred products	1,705.9	1,681.4	1,723.0	1,717.7	1,619	1,633	1,634	1,646	1,633	1,631
Tobacco manufactures	62.7	53.5	56.6	57.8	58	57	57	57	56	56
Textile mill products	712.4	722.3	736.4	742.6	707	727	729	736	733	737
Apparel and other textile products	1,109.9	1,091.5	1,110.6	1,121.7	1,102	1,107	1,108	1,130	1,109	1,114
Paper and allied products	676.8	678.9	681.0	684.0	675	677	676	678	677	683
Printing and publishing	1,460.2	1,499.0	1,502.4	1,502.7	1,465	1,497	1,498	1,504	1,507	1,507
Chemicals and allied products	1,023.0	1,032.3	1,036.8	1,034.6	1,021	1,022	1,014	1,026	1,032	1,033
Petroleum and coal products	168.4	167.2	167.7	167.8	167	164	166	164	165	167
Rubber and miscellaneous plastics products	794.1	806.4	817.5	826.0	791	809	810	815	818	824
Leather and leather products	149.0	147.0	154.2	155.2	147	150	149	155	152	153
Service-producing	75,438	76,869	76,810	77,524	75,419	76,956	77,057	77,276	77,393	77,498
Transportation and public utilities	5,301	5,370	5,386	5,434	5,255	5,344	5,350	5,363	5,377	5,385
Transportation	3,094	3,120	3,137	3,201	3,050	3,120	3,128	3,133	3,146	3,154
Communication and public utilities	2,207	2,250	2,249	2,233	2,205	2,224	2,222	2,230	2,231	2,231
Wholesale trade	5,758	5,826	5,836	5,828	5,736	5,775	5,781	5,797	5,805	5,806
Durable goods	3,387	3,435	3,437	3,428	3,383	3,401	3,405	3,418	3,420	3,425
Nondurable goods	2,371	2,391	2,399	2,400	2,353	2,374	2,376	2,379	2,385	2,381
Retail trade	18,040	18,347	18,392	18,416	17,939	18,205	18,226	18,274	18,256	18,324
General merchandise stores	2,338.0	2,351.3	2,359.7	2,388.7	2,374	2,390	2,387	2,407	2,408	2,425
Food stores	2,896.1	2,965.5	2,964.3	2,974.1	2,892	2,956	2,960	2,959	2,964	2,971
Automotive dealers and service stations	1,970.2	2,008.5	2,008.2	1,999.4	1,958	1,970	1,983	1,985	1,984	1,987
Eating and drinking places	6,074.2	6,153.0	6,177.2	6,175.0	5,911	5,976	5,982	5,985	5,991	6,007
Finance, insurance, and real estate	6,387	6,699	6,708	6,642	6,374	6,576	6,586	6,608	6,628	6,626
Finance	3,190	3,324	3,322	3,292	3,193	3,276	3,280	3,291	3,296	3,295
Insurance	1,968	2,055	2,059	2,048	1,971	2,037	2,037	2,043	2,051	2,050
Real estate	1,229	1,320	1,327	1,302	1,210	1,263	1,269	1,274	1,281	1,281
Services	23,628	24,632	24,667	24,433	23,317	24,025	24,083	24,214	24,277	24,311
Business services	4,880.2	5,140.7	5,190.6	5,201.1	4,935	5,083	5,086	5,105	5,134	5,155
Health services	6,619.3	6,921.7	6,947.2	6,948.8	6,615	6,822	6,853	6,887	6,920	6,942
Government	16,524	16,195	16,051	16,771	16,798	17,031	17,031	17,020	17,052	17,066
Federal	2,881	2,983	2,966	2,939	2,902	2,935	2,935	2,936	2,940	2,960
State	3,821	3,739	3,744	3,903	3,890	3,967	3,932	3,952	3,970	3,975
Local	9,822	9,473	9,341	9,929	10,006	10,149	10,164	10,132	10,142	10,111

p = preliminary

Table B-2. Average weekly hours of production or nonsupervisory workers[1] on private nonagricultural payrolls by industry

Industry	Not seasonally adjusted				Seasonally adjusted					
	Sept. 1986	July 1987	Aug. 1987 p	Sept. 1987 p	Sept. 1986	May 1987	June 1987	July 1987	Aug. 1987 p	Sept. 1987 p
Total private	34.9	35.1	35.3	34.7	34.7	34.9	34.9	34.9	34.9	34.8
Mining	42.1	42.1	42.6	41.7	(2)	(2)	(2)	(2)	(2)	(2)
Construction	38.5	38.6	38.4	36.3	(2)	(2)	(2)	(2)	(2)	(2)
Manufacturing	41.0	40.6	40.9	40.6	40.8	41.0	41.0	41.0	41.0	40.6
Overtime hours	3.7	3.6	3.9	3.9	3.5	3.8	3.7	3.8	3.8	3.6
Durable goods	41.6	41.0	41.3	41.0	41.4	41.6	41.5	41.6	41.6	40.9
Overtime hours	3.8	3.6	3.9	3.9	3.6	3.9	3.8	3.8	4.0	3.6
Lumber and wood products	40.8	40.4	40.7	39.8	40.3	41.0	40.6	40.6	40.4	39.3
Furniture and fixtures	40.5	39.2	40.3	39.8	40.0	39.9	40.0	40.0	40.1	39.3
Stone, clay, and glass products	43.0	42.5	42.6	42.4	42.4	42.3	42.0	42.2	42.1	41.8
Primary metal industries	42.1	43.0	43.2	43.0	42.1	43.1	43.1	43.4	43.7	43.0
Blast furnaces and basic steel products	41.8	44.0	43.8	44.0	41.9	43.3	43.5	44.1	44.3	44.1
Fabricated metal products	41.6	40.9	41.3	40.7	41.5	41.4	41.5	41.4	41.5	40.6
Machinery, except electrical	41.7	41.7	41.8	41.5	41.7	42.2	42.2	42.4	42.2	41.5
Electrical and electronic equipment	41.3	40.4	40.8	40.6	41.2	40.9	41.1	41.1	41.0	40.3
Transportation equipment	42.3	41.0	41.0	41.1	42.4	42.2	41.9	41.7	41.8	41.2
Motor vehicles and equipment	42.5	41.1	40.7	41.1	42.7	42.5	42.0	41.9	41.8	41.3
Instruments and related products	40.8	40.9	41.4	40.8	40.7	41.5	41.5	41.6	41.8	40.8
Miscellaneous manufacturing	39.5	38.9	39.4	39.3	(2)	(2)	(2)	(2)	(2)	(2)
Nondurable goods	40.1	40.0	40.4	40.1	39.9	40.2	40.2	40.3	40.3	39.9
Overtime hours	3.7	3.6	3.9	4.1	3.3	3.7	3.6	3.7	3.7	3.7
Food and kindred products	40.4	39.9	40.7	40.7	39.8	40.1	40.1	39.9	40.3	40.1
Tobacco manufactures	38.3	35.5	36.4	35.3	(2)	(2)	(2)	(2)	(2)	(2)
Textile mill products	41.8	41.6	42.3	41.3	41.4	42.0	42.1	42.4	42.1	40.9
Apparel and other textile products	36.8	37.0	37.4	36.0	36.8	37.2	37.1	37.3	37.4	36.0
Paper and allied products	43.2	43.2	43.2	44.2	42.9	43.5	43.3	43.5	43.4	43.9
Printing and publishing	38.3	37.8	38.1	38.4	38.0	37.9	38.1	38.1	37.9	38.1
Chemicals and allied products	41.8	41.9	42.1	42.8	41.8	42.1	42.0	42.2	42.4	42.8
Petroleum and coal products	44.1	44.6	43.3	43.6	43.5	44.3	43.3	44.4	43.1	43.0
Rubber and miscellaneous plastics products	41.6	41.0	41.5	41.1	(2)	(2)	(2)	(2)	(2)	(2)
Leather and leather products	36.7	38.6	38.8	36.0	(2)	(2)	(2)	(2)	(2)	(2)
Transportation and public utilities	39.2	39.4	39.5	39.3	39.1	39.2	38.8	39.2	39.2	39.2
Wholesale trade	38.3	38.3	38.4	38.1	38.2	38.3	38.2	38.1	38.3	38.0
Retail trade	29.1	30.0	30.2	29.6	29.1	29.4	29.2	29.3	29.5	29.6
Finance, insurance, and real estate	36.2	36.2	36.5	36.0	(2)	(2)	(2)	(2)	(2)	(2)
Services	32.4	32.8	33.0	32.4	32.4	32.5	32.5	32.5	32.6	32.5

---

[1] Data relate to production workers in mining and manufacturing; to construction workers in construction; and to nonsupervisory workers in transportation and public utilities; wholesale and retail trade; finance, insurance, and real estate; and services. These groups account for approximately four-fifths of the total employees on private nonagricultural payrolls.

[2] This series is not published seasonally adjusted since the seasonal component is small relative to the trend-cycle and/or irregular components and consequently cannot be separated with sufficient precision.

p = preliminary

Table B-3. Average hourly and weekly earnings of production or nonsupervisory workers[1] on private nonagricultural payrolls by industry

Industry	Average hourly earnings				Average weekly earnings			
	Sept. 1986	July 1987	Aug. 1987 p	Sept. 1987 p	Sept. 1986	July 1987	Aug. 1987 p	Sept. 1987 p
Total private	$8.82	$8.91	$8.94	$9.06	$306.94	$312.74	$315.58	$314.38
Seasonally adjusted	8.78	8.96	9.02	9.02	304.67	311.81	314.80	312.09
Mining	12.52	12.31	12.35	12.48	527.09	519.25	526.11	520.42
Construction	12.59	12.57	12.67	12.80	484.72	485.20	489.06	464.64
Manufacturing	9.73	9.87	9.86	10.02	398.93	400.72	403.27	406.81
Durable goods	10.29	10.40	10.41	10.53	428.06	426.40	429.93	431.73
Lumber and wood products	8.35	8.46	8.46	8.48	340.68	341.78	344.32	337.50
Furniture and fixtures	7.55	7.67	7.74	7.80	305.78	300.66	311.92	310.44
Stone, clay, and glass products	10.11	10.33	10.31	10.44	434.73	439.03	439.21	442.66
Primary metal industries	11.82	11.97	11.92	12.11	497.62	514.71	514.94	520.73
Blast furnaces and basic steel products	13.76	13.70	13.63	13.82	575.17	602.80	596.99	608.08
Fabricated metal products	9.88	9.95	9.95	10.03	411.01	405.96	410.94	408.22
Machinery, except electrical	10.61	10.74	10.77	10.84	442.44	447.86	450.19	449.86
Electrical and electronic equipment	9.70	9.89	9.90	9.96	400.61	399.56	403.92	402.38
Transportation equipment	12.82	12.83	12.90	13.12	542.29	526.03	528.90	539.23
Motor vehicles and equipment	13.42	13.36	13.42	13.74	570.35	549.10	546.19	564.71
Instruments and related products	9.54	9.74	9.79	9.84	389.23	398.37	405.31	401.47
Miscellaneous manufacturing	7.58	7.72	7.71	7.78	299.41	299.54	303.77	305.75
Nondurable goods	8.96	9.16	9.11	9.32	359.30	366.40	368.04	373.73
Food and kindred products	8.65	8.88	8.81	8.95	349.46	354.31	358.57	364.27
Tobacco manufactures	12.29	14.85	14.10	12.97	470.71	527.18	513.24	457.84
Textile mill products	7.02	7.14	7.17	7.24	293.44	297.02	303.29	299.01
Apparel and other textile products	5.91	5.89	5.90	6.04	217.49	217.93	220.66	217.44
Paper and allied products	11.23	11.48	11.41	11.71	485.16	495.94	492.91	517.58
Printing and publishing	10.12	10.25	10.31	10.49	387.60	38[illegible].45	392.81	402.82
Chemicals and allied products	12.03	12.37	12.32	12.57	502.85	518.30	518.67	538.00
Petroleum and coal products	14.18	14.48	14.51	14.86	625.34	645.81	628.28	647.02
Rubber and miscellaneous plastics products	8.72	8.93	8.90	9.07	362.75	366.13	369.35	372.78
Leather and leather products	5.95	5.98	6.01	6.21	218.37	230.83	233.19	223.56
Transportation and public utilities	11.77	12.00	12.01	12.10	461.38	472.80	474.40	475.53
Wholesale trade	9.37	9.57	9.61	9.64	358.87	366.53	369.02	367.28
Retail trade	6.06	6.07	6.06	6.20	176.35	182.10	183.01	183.52
Finance, insurance, and real estate	8.39	8.69	8.79	8.80	303.72	314.58	320.84	316.80
Services	8.19	8.33	8.39	8.51	265.36	273.22	276.87	275.72

[1] See footnote 1, table B-2.

p = preliminary

Table B-4. Hourly Earnings Index for production or nonsupervisory workers[1] on private nonagricultural payrolls by industry

(1977 = 100)

Industry	Not seasonally adjusted					Seasonally adjusted						
	Sept. 1986	July 1987	Aug. 1987p	Sept. 1987p	Percent change from: Sept. 1986-Sept. 1987	Sept. 1986	May 1987	June 1987	July 1987	Aug. 1987p	Sept. 1987p	Percent change from: Aug. 1987-Sept. 1987
Total private nonfarm:												
Current dollars	170.1	172.7	173.2	175.0	2.9	169.8	172.9	172.9	173.2	174.1	174.7	0.3
Constant (1977) dollars	95.0	93.4	93.2	N.A.	(2)	95.0	94.0	93.8	93.7	93.7	N.A.	(3)
Mining	181.8	181.8	182.0	183.7	1.0	(4)	(4)	(4)	(4)	(4)	(4)	(4)
Construction	153.8	153.5	154.7	156.2	1.6	151.9	154.1	155.0	154.3	154.7	154.4	-.2
Manufacturing	172.3	174.9	174.5	176.5	2.4	172.7	174.4	174.7	174.7	175.3	176.9	.9
Transportation and public utilities	172.2	175.4	175.8	177.5	3.1	171.7	176.2	175.6	176.4	176.7	176.8	.1
Wholesale trade	172.9	176.6	177.3	177.9	2.9	(4)	(4)	(4)	(4)	(4)	(4)	(4)
Retail trade	159.5	160.3	160.4	163.0	2.2	159.0	160.2	160.3	160.9	161.5	162.5	.6
Finance, insurance, and real estate	180.4	186.8	189.1	189.0	4.8	(4)	(4)	(4)	(4)	(4)	(4)	(4)
Services	175.4	179.1	180.3	182.4	4.0	174.7	179.9	179.9	180.3	[illegible]	181.7	-.4

1 See footnote 1, table B-2.
2 Percent change is -1.6 from August 1986 to August 1987, the latest month available.
3 Percent change is .1 from July 1987 to August 1987, the latest month available.
4 These series are not seasonally adjusted since the seasonal component is small relative to the trend-cycle and/or irregular components and consequently cannot be separated with sufficient precision.
N.A. Data not available.
p = preliminary.

Table B-5. Indexes of aggregate weekly hours of production or nonsupervisory workers[1] on private nonagricultural payrolls by industry

(1977 = 100)

Industry	Not seasonally adjusted				Seasonally adjusted					
	Sept. 1986	July 1987	Aug. 1987 p	Sept. 1987 p	Sept. 1986	May 1987	June 1987	July 1987	Aug. 1987 p	Sept. 1987 p
Total	119.3	122.5	123.8	121.7	117.6	120.2	120.0	120.6	121.2	120.2
Goods-producing	101.2	100.0	102.2	100.7	97.8	99.2	98.9	99.5	99.7	97.4
Mining	81.8	84.1	86.2	84.8	80.7	83.4	83.5	85.0	85.6	83.7
Construction	145.9	145.9	148.3	136.8	132.3	134.3	132.6	133.2	133.6	124.0
Manufacturing	93.5	91.9	94.0	94.4	91.9	93.1	93.1	93.6	93.9	92.9
Durable goods	90.9	88.5	90.4	91.0	89.8	90.5	90.5	90.6	91.3	90.1
Lumber and wood products	103.2	104.7	106.1	103.2	98.7	103.2	101.7	102.4	101.2	98.6
Furniture and fixtures	108.9	105.9	111.8	111.7	107.1	109.0	109.5	111.6	111.7	109.9
Stone, clay, and glass products	90.4	88.7	89.9	89.8	86.7	86.9	86.1	86.1	86.3	86.1
Primary metal industries	60.5	62.9	64.5	65.9	60.4	63.1	63.5	64.4	65.3	65.9
Blast furnaces and basic steel products	46.5	52.7	53.0	54.1	46.6	50.7	51.4	52.6	53.4	54.1
Fabricated metal products	90.0	86.5	88.8	89.1	88.9	89.0	89.1	89.0	89.4	87.9
Machinery, except electrical	84.8	84.7	85.5	86.5	85.0	86.0	86.5	87.0	87.4	86.7
Electrical and electronic equipment	102.2	97.7	99.9	100.0	101.3	99.4	99.9	100.6	100.8	99.3
Transportation equipment	97.7	91.0	92.2	95.4	97.5	97.3	96.6	94.3	97.2	95.2
Motor vehicles and equipment	87.4	78.3	79.4	83.7	87.1	86.1	85.1	81.5	85.8	83.4
Instruments and related products	101.9	100.7	102.2	101.7	101.9	102.0	102.2	103.0	103.3	101.9
Miscellaneous manufacturing	81.7	78.1	82.6	83.4	79.3	81.0	81.4	81.9	82.0	81.0
Nondurable goods	97.5	96.8	99.5	99.5	95.0	97.0	97.0	98.1	97.7	97.0
Food and kindred products	106.4	102.5	107.9	107.8	97.6	99.6	99.3	99.6	99.5	98.9
Tobacco manufactures	86.1	64.2	70.8	70.3	76.5	80.1	76.3	73.1	71.6	62.5
Textile mill products	80.6	81.7	84.7	83.4	79.2	82.9	83.3	84.8	83.7	81.8
Apparel and other textile products	85.6	84.2	86.7	84.5	85.0	85.8	85.9	88.2	86.6	83.9
Paper and allied products	100.0	100.3	100.5	103.6	98.9	100.5	100.0	100.8	100.4	102.8
Printing and publishing	128.8	129.5	131.3	132.4	128.4	130.0	131.1	131.4	131.2	132.1
Chemicals and allied products	92.8	94.2	95.2	97.4	92.5	93.7	92.8	94.5	95.5	97.0
Petroleum and coal products	84.1	87.5	85.2	86.3	81.4	84.5	83.4	84.7	83.0	84.3
Rubber and miscellaneous plastics products	112.2	111.7	114.6	115.3	111.6	114.5	114.8	115.0	115.9	114.9
Leather and leather products	55.7	59.1	62.6	58.2	55.2	59.5	59.7	62.2	61.8	57.8
Service-producing	129.3	136.9	135.7	133.4	128.5	131.9	131.7	132.3	133.1	132.8
Transportation and public utilities	107.4	109.6	110.2	110.8	106.1	108.5	107.6	109.0	109.4	109.6
Wholesale trade	117.7	118.8	119.3	118.0	116.8	117.7	117.6	117.5	118.2	117.2
Retail trade	119.1	124.7	125.8	123.1	118.4	121.2	120.4	121.2	122.0	122.5
Finance, insurance, and real estate	138.3	144.5	145.8	142.1	137.8	142.5	142.7	142.0	143.4	141.5
Services	147.2	155.4	156.0	153.0	146.7	151.2	151.7	152.5	153.2	152.8

[1] See footnote 1, table B-2.

p = preliminary.

Table B-6. Indexes of diffusion: Percent of industries in which employment[1] increased

Time span	Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Over 1-month span	1985	55.9	47.0	52.4	47.3	53.2	46.8	53.8	53.8	47.8	53.2	54.3	57.3
	1986	53.2	48.1	48.1	53.5	52.4	46.8	52.4	56.2	55.1	53.2	59.7	59.7
	1987	53.5	56.8	58.6	58.4	58.6	c55.7	68.6	p53.0	p64.9			
Over 3-month span	1985	51.1	48.6	42.4	46.5	44.3	49.7	47.0	48.6	45.9	47.6	55.1	56.5
	1986	49.7	44.9	45.7	48.4	47.6	45.4	48.4	55.1	55.9	58.1	58.6	60.3
	1987	58.6	59.5	61.1	61.6	61.4	67.3	p64.9	p72.4				
Over 6-month span	1985	46.5	46.5	43.2	44.3	44.3	45.1	43.0	44.3	49.2	49.2	47.3	45.9
	1986	47.6	47.6	43.0	43.2	45.4	48.4	47.3	53.0	59.2	58.9	57.8	58.9
	1987	61.9	62.7	58.9	67.3	p66.5	p71.9						
Over 12-month span	1985	44.6	44.1	43.8	40.8	41.6	41.6	42.2	42.4	43.8	44.3	44.1	42.4
	1986	43.2	44.1	46.2	45.7	47.8	49.5	49.5	51.6	54.9	52.2	55.1	56.5
	1987	62.2	p65.1	p67.3									

[1] Number of employees, seasonally adjusted for 1, 3, and 6 month spans, on payrolls of 185 private nonagricultural industries. Data for the 12-month span are unadjusted.

p = preliminary

c = corrected

NOTE: Figures are the percent of industries with employment rising. (Half of the unchanged components are counted as rising.) Data are centered within the spans.

Senator **Sarbanes**. Well, Commissioner, thank you very much. I'll be very brief since there is a vote going on.

The civilian labor force over the course of this year has been growing, as I understand it, at about half the rate of the previous 4 years, about 100,000 a month.

What's the explanation for this? You make reference right at the close of your statement to this when you say——

Mrs. **Norwood**. Yes.

Senator **Sarbanes** [continuing]. The number of teenagers. Reflecting birth rates of 16 to 18 years ago? Is that what we're experiencing?

Mrs. **Norwood**. Yes. That's right. There are fewer teenagers in the population and there are even fewer of them coming into the labor force. As a result, there is less really upward pressure on the unemployment rate since teenagers always have much higher unemployment rates than the rest of the population.

Senator **Sarbanes**. And what does that demographic line look like for the next 3 to 5 years?

Mrs. **Norwood**. We anticipate that from now through the turn in the century the labor force will be growing at only about one-half the rate that it has grown in the past. This is largely because until about the middle of the 1990's teenagers will continue to come in very slowly. Then that will turn around a bit. Overall, the labor force will age. The average age of the labor force will be much higher in the future than it has been in recent years.

Senator **Sarbanes**. You made reference to the improvement in the black teenage jobless rate. What do you perceive to be the explanation?

Mrs. **Norwood**. We have seen an increase in the labor force participation of blacks in general, particularly the teenagers, and more of them have obtained jobs. Nevertheless, their rates, though they are not 45 percent as they were a while ago, are still 30 percent.

Senator **Sarbanes**. Is your perception that their situation has improved simply because of the overall tightening of the labor market, or is there something else at work?

Mrs. **Norwood**. Well, it may be the overall effect of the economy. As more and more people go back to work, then the jobs come to those who have the hardest time in the labor market. It's probably that more than anything else. They do better when there are more jobs and our employment growth has been considerable. There's still a long way to go.

Senator **Sarbanes**. Well, I'm not going to be able, as those buzzers indicate, to spend any more time with you. I regret that. We thank you very much for being with us again. We look forward to seeing you again next month.

The hearing is adjourned.

[Whereupon, at 9:40 a.m., the committee adjourned, subject to the call of the Chair.]

○

83-467 (160)